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From
Hannell
May 22d 1877

MODERN THERAPEUTICS:

A COMPENDIUM OF
RECENT FORMULÆ, APPROVED TREATMENT,
AND
SPECIFIC METHODS
IN
MEDICINE AND SURGERY,

WITH AN APPENDIX ON HYPODERMIC MEDICATION, INHALATION,
AERATION, AND OTHER REMEDIAL AGENTS AND THERA-
PEUTIC METHODS, OF RECENT INTRODUCTION.

BY GEORGE H. NAPHEYS, A.M., M.D., ETC.

Fourth Edition, Re-written and Enlarged.



PHILADELPHIA:
D. G. BRINTON, 115 SOUTH SEVENTH STREET.
1877.

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1222 and 1224 Sansom Street, Philadelphia.

EDITOR'S PREFACE.

When this work was somewhat more than one-third through the press, the author was attacked by the malady which brought his life and labors to their close. The MSS. were transferred by his representatives to the present editor, with the request that the publication be completed. This has now been done, in general conformity with the author's plan, as stated in his Preface. Some incompleteness, however, in the references and résumés will be noted in the later pages. The author had not entirely carried out his arrangement in this portion of his manuscript, and although the editor has filled up the lacunæ to some extent, he has been obliged to defer the completion of the scheme until another edition, which, he hopes, will in no long time be demanded.

The unusual popularity of the previous editions encourages this hope. In fact, this work stands alone, of its kind, in medical literature. It presents the Art of Therapeutics in all its aspects, and divested of that barren theorizing which has been its bane. Acquainting the reader with the exact treatment of each disease by living clinical teachers and careful practitioners of several countries, it vastly widens his therapeutic resources, prevents him from becoming a routinist, and inspires him with confidence in the remedies he employs.

So far from leading him to become a mere *formularum præscriptor*, the diversity it exhibits teaches him independence of thought; while the care with which the indications calling for particular remedies or combinations are given, awakens and instructs his powers of clinical observation.

But this remark is not intended to belittle the value of definite

formulæ. The author has most wisely preserved these whenever possible. By skilful combinations, nauseous articles are rendered palatable, which is often no slight matter; ingredients of facile decomposition may be given permanence; the labors of the pharmacist are lightened; and, more than all, the efficiency of pharmaceutical products may be very largely increased.

The intelligent recognition of the last-mentioned fact may be claimed as one of the later advances of medical science. The polypharmacy of our forefathers in the profession has disappeared, not giving way to any nonsensical "law of the single remedy," as Homœopathy advocates, but to a clear insight into the *synergic* action of remedies, by virtue of which a judicious combination of several drugs acts in a given direction more forcibly than any one of them singly. It is needless here to quote instances of this truth. They may be found in abundance in the pages which follow. If studied and applied in daily professional practice, they will convince the most doubting that the nihilism in therapeutics, which is so prevalent to-day, comes either from an ignorance of the correct methods of prescribing drugs, or from a pursuit of that *ignis fatuus*, "physiological therapeutics."

D. G. B.

AUTHOR'S PREFACE.

This volume differs from ordinary works on the practice of Medicine, in being devoted *exclusively* to Practice; from works on *Materia Medica*, in treating only of Therapeutics; and from a Formulary, in that it is not a mere collection of prescriptions, but aims at a systematic analysis of all current and applied means of combating disease.

The contents of the book are nearly doubled in this edition. Many diseases omitted in the previous editions here find a place. The sections on Diseases of Women and Diseases of Children, as well as many other parts, are greatly enlarged. The division on Surgical Therapeutics is new. It does not embrace *operations* nor *apparatus*, but the application of articles in the *materia medica* to surgical practice.

As I have received a portion of the matter here presented directly from the authors, in this country and in Europe, this much of the volume will not be found elsewhere. When I have drawn from medical periodicals, the name and date of the journal are given in the text. But where a monograph or systematic treatise has been the source of information, the name of the author and his residence are given, and by consulting the index to his works the reader can readily verify the quotation or abstract of his views.

Formulæ from foreign sources have generally been rendered into the terms of the United States *Pharmacopœia*, equivalent official preparations replacing those unknown to the shelves of our apothecaries. A formula that cannot be filled by the druggist is useless to the physician, or, at least, puts him to the labor of translating it into familiar ingredients. The new nomenclature is adopted, the

salts of the alkaline metals being designated as of the particular metal, and not of its oxide, etc.

The diseases are arranged in alphabetical order under the general nosological division to which they belong. The treatment of each is first stated as given by different practitioners, then by various hospitals, after which follows a résumé of the more important remedies employed in its management. An asterisk * designates those especially commended.

American, English and Continental practitioners are quoted in nearly equal numbers. As I have not attempted to mention every remedy employed for a disease, but only such as have some good authority, or else a very plausible theory for their use, so I have endeavored to select as authorities either practitioners of acknowledged reputation, or else such who have sustained their therapeutic suggestions by sound reasoning and sufficient evidence.

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MODERN THERAPEUTICS.

PART I.

Medical Therapeutics.

I. DISEASES OF THE NERVOUS SYSTEM.

Apoplexy—Chorea—Delirium Tremens—Epilepsy—Headache—Hemicrania—Hypochondriasis—Hysteria—Insolation—Insomnia—Meningitis, Acute—Neuralgia—Paralysis—Progressive Locomotor Ataxia—Sciatica—Tetanus—Tic Douloureux—Vertigo.

APOPLEXY.

The treatment of this disease of the nervous system is given as follows by

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

Active purgatives generally do good after the patient has in some degree revived, by relieving the head and improving the secretions of the alimentary canal.

- | | | |
|----------------------------------|-------|----|
| 1. R. Hydrargyri chloridi mitis, | gr. v | |
| Pulveris jalapæ compositi, | 3j. | M. |

This powder given as soon as the patient can swallow, and followed up by an ounce of *sulphate of magnesium* in *camphor water* every four or six hours, and continued according to its effects, for a greater or less length of time, is the best method of promoting re-

covery, and preventing relapse in cases associated with simple plethora. If the attack be in consequence of hypertrophy of the heart, without valvular disease, then eight or ten minims of *tincture of digitalis* may be added to each dose of the purgative medicine. If the patient cannot swallow, three or four drops of *croton oil* should be put on the back part of the tongue, and *stimulating enemata* thrown up the rectum.

The following enemata are recommended:—

- | | | | | |
|-------|----------------------|----|---------|----|
| 2. R. | Olei ricini, | | | |
| | Olei terebinthinæ, | aa | f.℥iss | |
| | Tincturæ assafœtidæ, | | f.℥ij | |
| | Decocti avenæ, | | f.℥xij. | M. |

To be thrown up by means of a long stomach-pump tube.

- | | | | | |
|-------|--------------------|----|--------|----|
| 3. R. | Olei ricini, | | | |
| | Olei terebinthinæ, | aa | f.℥j | |
| | Olei tiglij, | | ℥vj | |
| | Decocti avenæ, | | f.℥iv. | M. |

For an enema.

All employment of *emetics* is to be condemned. *Blood-letting* may be resorted to, if the patient be seen during the fit, if the tendency to death is by coma, if the pulse be full, or hard, or thrilling, if the vessels of the neck be congested, the heat of the scalp increased, if the face be full and turgid, and especially if the action of the heart be vigorous, its sounds normal, and the heat of the skin preserved. Ten ounces will generally be sufficient, if taken at the first outset of the attack; but if the pulse does not improve, and the symptoms remain unrelieved, sixteen to twenty ounces may be taken. The head and shoulders should be raised while the blood is flowing. When the pulse is small and slow, feeble or almost imperceptible, the skin cold and clammy, with a tendency to death by syncope, then no advantage is to be gained by the abstraction of blood. Blood-letting is, therefore, contra-indicated in anæmia, aortic valvular disease, and in cases commencing with syncope. If the blood-letting be not followed by some degree of consciousness, it may be inferred that the amount of blood effused is considerable, and that the patient, in all probability, will not recover. Still, an additional chance may be given by applying to the head *cold cloths*, or *crushed ice* in a bladder, *leeches* to the temples, and *mustard cataplasms* to the feet; also by placing a drop or two of *croton oil* on the tongue, and by throwing up a *cathartic enema* of castor oil or other purgative.

The *diet* should be low until all apprehension of a relapse is past. It should be limited to milk, boiled vegetables, light puddings and fish. At no subsequent period should a full animal diet or undiluted wines be indulged in. At the same time, the irritability of the system and the heart's action must not be increased by ordering too lowering a regimen.

J. HUGHLINGS JACKSON, M. D., LONDON.

There is, unfortunately, little to be done. The chief thing is to keep the patient quiet. Two drops of *croton oil* should be put on the tongue and the urine drawn off, if it do not pass freely without help. The application of blisters to the back of the neck, or of mustard plasters to the calves of the legs, is a common practice, with no evidence to show that these applications are of service. Still, in certain cases of chronic cerebral disease, blisters relieve the patient of severe pain in the head; and it is not possible to deny that they may be of service when the circulation of the brain is quickly disturbed after a clot. Were our author to use blisters, which he never does, he would only employ them where there is secondary disturbance of the circulation. It is hard to believe that mustard plasters to the calves of the legs can be of any service or disservice. Dr. JACKSON never prescribes any medicine, except *croton oil*, by the mouth.

If the patient is found in, or has passed into, a condition in which the face is flushed, the temperature above 100, the veins prominent, and the respiration and circulation largely disturbed, treatment, beyond, perhaps, purgatives, is of little use. If, however, the pulse be not very rapid, little more than 100, and if it and the respiration be regular, it is not unreasonable to think that the system may be relieved—though the ultimate size of the clot may not be influenced—by *bleeding*. The practice of bleeding in cerebral hemorrhage, deprecated by TROUSSEAU and TODD, must be exceedingly rare in England, as in the whole course of Dr. JACKSON's life he has seen but one person bled for cerebral hemorrhage. If the pulse be very high, 120, 130 or 150, or if it be weak, venesection must not be thought of.

This is about all of the little that can be done for patients who are in the apoplectic condition. When this condition is passed, we are practically unable to help in the immediate difficulty of infusion of blood in nervous tissue. We have still, as in many other

diseases, to improve the general health. The proper care of a patient who has a clot of blood in his brain, and who is liable to have more effused, consists in attending to his diet, excretions, sleep and exercise. Yet there is nothing in this peculiar to the treatment of cerebral hemorrhage. For the immediate lesion, blood in nervous tissue, our author knows of no direct treatment.

PROF. PAJOT, FACULTÉ DE MÉDECINE DE PARIS.

According to the age and strength of the subject, *bleed*, or apply *leeches* to the anus or behind the ears. Repeated and energetic *counter-irritants* should be applied, from place to place, along the limb. A purgative *enema* is often of great benefit. The head should be kept raised, and all constriction of the circulation carefully guarded against. *Cold compresses* of water, or water and vinégar, may be applied to the head, or even a bladder half filled with *ice*, which should be withdrawn at intervals.

RÉSUMÉ OF REMEDIES.

Acidum Arseniosum is of benefit in strong plethoric subjects with a tendency to apoplectic congestion, but is not applicable to old weakly persons. It is supposed to act by reducing the excess of the red globules of the blood.

Aloes. Aloetic purgatives are frequently indicated and often prove beneficial.

Colocynthis. In full doses, repeated until it operates freely, colocynth is useful as a powerful cathartic and derivative.

* *Hydrargyri Chloridum Corrosivum.* Dr. HEADLAND recommends for the threatenings of apoplexy in old age (*e. g.*, vertigo, confusion of ideas and general embarrassment of the mental faculties) corrosive sublimate in doses of gr. $\frac{1}{4}$ in solution, three times a day, for three or four weeks.

Hydrargyri Chloridum Mite. Administered as recommended by Dr. J. CORLAND (grs. x-xv, mixed with a few grains of gamboge, rubbed up with butter, and placed at the root of the tongue), calomel, although a speedy and effectual purge, is not unattended with danger. Alarming ptyalism has followed this treatment.

Oleum Terebinthinæ is used both externally and internally. A full dose with an equal quantity of castor-oil, acts, when the patient can swallow, as a useful purgative.

* *Oleum Tyglis* is peculiarly adapted as a purgative, derivative and revulsive in apoplexy, from the readiness with which it may be administered, by being simply placed at the back of the tongue.

Potassii Iodidum has been recommended in cerebral apoplexy, on account of its eliminative power, after the acute symptoms have subsided.

Sinapis. In cases of apoplexy from over distention of the stomach, mustard, in doses of a tablespoonful or less in a tumbler of warm water, is a good and quick emetic, which, by removing the exciting cause, is of essential benefit.

Strychnia. Dr. MARSHALL HALL has derived great benefit from the use of ace-

tate of strychnia in the threatenings of apoplexy. He advises the following formula :—

4.	R.	Strychniæ acetatis,	gr. j	
		Acidi acetici,	℥. xx	
		Alcoholis,	f. ʒij	
		Aquæ,	f. ʒvj.	M.

Dose, ten drops, combined with a rigid system of mental discipline, diet, etc.

blood-letting is no longer the routine practice in apoplexy. It is now generally recognized that there is less danger in not bleeding at all than in taking blood in doubtful cases, in which there may be some of the indications for bleeding.

The *contra-indications* of bleeding in apoplexy are an age over sixty; a feeble, very frequent, intermitting, slow or large pulse, or one inclined to double beat; a respiration labored and accompanied with cold perspiration; great mobility of the nervous system, with weak muscles, whether the body be thin or corpulent; an attack soon after a full meal, or after great mental or bodily fatigue.

The *indications* for bleeding are a quick, wiry, resisting pulse, flushed countenance; warm perspirations; noisy breathing; a tendency to spasmodic muscular contraction; and an age under sixty.

Diffusible Stimulants may be given with advantage, particularly when the pulse has a double beat, in atonic cases where bleeding is contra-indicated. *Aqua ammoniæ* is one of the best of these; ℥. xij–xv may be administered in water, and the vapor also applied to the nostrils. Or f. ʒ ss–j of the *aromatic spirit of ammonia* may be given in water or camphor mixture. Or grs. v of the carbonate of ammonium may be ordered.

Emata. Terebinthinate and other enemata often afford relief, not only by removing scybala, but by their powerful revulsive action. (F. 2, 3.)

EXTERNAL REMEDIES.

Inter-irritation. *Capsicum cataplasms* to the feet are powerful and excellent revulsives, which will, however, cause vesication if kept on too long. *Sinapisms* to which have been added powdered capsicum, or oil of turpentine, may, in most instances, be applied with evident benefit to the soles of the feet and the inner parts of the calves and thighs. *Blisters* applied to the calves of the legs and sometimes to the nape of the neck, are of benefit in *simple* or "*serous*" apoplexy, but of little advantage in *sanguineous* apoplexy. An open blister at the nape of the neck (or better, a seton or issue there) is often very useful when there is a tendency to apoplexy. *Turpentine stupes* to the extremities are frequently productive of benefit.

applied to the head while the feet are immersed in hot water, is sometimes productive of benefit, but must be employed with great caution in debilitated or old subjects

Leeches. In threatened apoplexy arising from the suppression of a habitual discharge, as from piles, leeches applied to the verge of the anus often afford prompt relief. If the threatened attack arise from suppression of the menses, the leeches should be applied to the inner side of the thighs. Sir HENRY HOLLAND states that he knows of no mode in which a given quantity of blood can be removed with equal good effects. Leeches to the verge of the anus give more immediate benefit than three times the number to the temples or elsewhere.

CHOREA.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

The indications of cure are: 1. To remove, if possible, all morbid states of the body which may tend to aggravate the disease, such as constipation, anæmia, amenorrhœa, worms. 2. By well regulated purgative medicines to subdue any cerebral congestion. 3. To sustain the strength and improve the vigor of the nervous system by tonic and stimulant medicines, by food and by the cold bath.

5. R. Camphoræ, ℥v
 Syrupi. q. s. M.
 Divide into 20 pills. One three times a day. Useful after discharges have become healthy by the action of the purgatives.
6. R. Spiritus ætheris nitrosi, f. ʒj
 Aquæ camphoræ, f. ʒiij. M.
 Tablespoonful three times a day.

Many young women, who attribute the attack to fright, get well under this treatment.

G. H. BARLOW, M. D., LONDON.

In ordinary cases the exhibition of purgatives to keep the bowels freely open, and the *sulphate of zinc*, in doses gradually increased from gr. j—xij—xv—xx, or even more, will effect a cure; when, however, the sulphate has been used in these large doses, its sudden discontinuance seems to be felt by the system, and a return of the symptoms ensues; the best rule, therefore, for its exhibition is as follows:

The bowels being kept open, the sulphate should be commenced in doses of gr. j, for a child æt. 12 years, and this should be increased by the addition of gr. j to each dose, daily, until it either causes sickness, or there is an obvious diminution of the choreal movements. In the former case, the dose should be diminished by at least one-half, and so continued for several days, with a view of establishing a tolerance; but if, on the other hand, there be marked improvement, it should be no further increased, but continued without alteration until either the improvement ceases—in which case it should be again gradually increased—or the disease has altogether subsided. When the latter is the case, the dose should be diminished day by day, rather than discontinued suddenly, as

by following the former course, we have less reason to dread a relapse. When anæmia is present, *iron* has more control over the disease than zinc.

PROF. BOUCHUT, PARIS.

In the treatment of chorea, Dr. BOUCHUT prescribes *chloral*, two and a half scruples in the course of the day. During the sleep thus provoked no choreic movements are observed. Our author affirms that chloral carefully prepared may be administered to children of from twelve to fifteen years, in doses of gr. xxx- \mathfrak{D} iv, repeated daily during ten or fifteen days, without any bad results.

THOMAS KING CHAMBERS, M. D., ETC., LONDON.

7. R. Liquoris potassii arsenitis, $\mathfrak{m}\nu$
 Thrice daily; to be increased to $\mathfrak{m}\text{xvj}$.
 Also *cod liver oil* and *iron*, if indicated by the general condition.

Injudicious management of patients afflicted with chorea frequently protracts the case. One of the most common forms of injudicious management is the fixing of the attention of patients upon their infirmity, by telling them how bad they are, offering unnecessary help, etc. They should be encouraged to make every exertion to direct the movements of the limbs; as by slow walking to music, carrying trays and crockery, and other things that demand care. In order that their attention may be withdrawn from their deficiencies, looking glasses and the distressing sight of other choreics should be avoided. They should be got away from home as soon as possible. Sent under the care of a judicious person to the seaside, or anywhere else for an excuse, children often recover rapidly; whereas, had they remained at home, they would have continually relapsed.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

8. R. Zinci valerianatis, $\mathfrak{D}\text{ij}$
 Cinchonæ sulphatis, $\mathfrak{D}\text{j}$. M.
 For 20 pills; one thrice daily.

The *Bromide of Iron* has lately been employed by our author with excellent effects. It should be given in increasing doses, beginning with never less than five grains for a child, and running up the dose rapidly to twenty grains three times a day.

9. R. Cupri ammoniati, gr. $\frac{1}{4}$
 In pill thrice daily; to be gradually increased to gr. j.

10. R. Extracti cimicifugæ fluidi, gtt.xx.
For one dose, three times a day.

THOMAS HILLIER, M. D., LONDON.

11. R. Liquoris potassii arsenitis, m℥ij
Potassii bicarbonatis, gr. iij
Potassii iodidi, gr. ij
Aquæ camphoræ, f. ʒss. M.

For one dose, thrice daily, to children aged five, for aggravated chorea, attended with severe pains in the limbs, and rheumatic persistent swellings.

Arsenic in full doses is a valuable remedy in a fair proportion of cases, but in some instances it entirely fails. *Iodide of potassium* is useful when the patient is subject to chronic rheumatism.

Occasionally purgatives and tonics, especially *iron*, are attended with much success. *Strychnia*, so highly recommended by TROUSSEAU, seems, to our author, to be highly injurious in the acuter stages of the disease; in the more chronic form, and where there is a tendency to paralysis, it is of service. Iron and strychnia may be combined thus:—

12. R. Strychniæ, gr. ʒ
Vini ferri, f. ʒiv. M.
A dessertspoonful thrice daily, to a child ten years of age.

Narcotics, such as opium, belladonna, cannabis indica, or conium, are of little or no use. Antispasmodics, such as valerian and assafoetida, are also useless.

Our author has seen good results from the employment of *baths of sulphuret of potassium*:—

13. R. Potassii sulphureti, ʒiv
Aquæ (90° F.), C. xxx.
For a bath; the patient to remain in it for an hour daily.

This bath is also recommended by Dr. FELIX VON NIEMEYER, when there is anæmia.

Gymnastic exercises, shampooing and passive movements are of service. As many muscles as possible should be exercised, without fatiguing any of them. *Shower baths* are useful in the latter stages, when the patient is not timid, or too much excited by them.

Dr. NIEMEYER quotes *Benedikt*, who declares that out of more than twenty cases of chorea, treated by him by the *constant galvanic current*, not one has failed to recover. The current which he employs is just strong enough for the patient to feel it distinct-

ly, and he applies it along the spine, the patient standing erect. Painful currents aggravate the symptoms.

J. W. OGLE, M. D., LONDON.

14. R. Pulveris physostigmatis, $\mathfrak{z}\text{i}$
Alcoholis, $\text{f.}\mathfrak{z}\text{j}$. M.

Begin with twenty minims, thrice daily, and increase, by ten minims a dose, to $\text{f.}\mathfrak{z}\text{j}$. Our author reports several cases treated in this manner successfully.

C. B. RADCLIFFE, M. D., LONDON.

Our author, though he has great faith in the efficacy of *arsenic* in chorea, has been obliged to discontinue it in a number of cases, on account of the gastric disturbance it produced. He, therefore, resorted to its use hypodermically and endermically, with favorable results.

Hypodermically, he employs Fowler's solution, diluted with an equal part of water, in doses of miij per day, gradually increased in about two months' time to mxiv .

Endermically, he advises:—

15. R. Liquoris potassii arsenitis, $\text{m}\text{xv}-\text{xx}$. M.
To be dropped upon lint moistened with water and applied, covered with oil silk, night and morning, to a raw blistered surface.

This treatment gives rise to much local irritation, and has generally, on this account, to be suspended every six or seven days.

PROF. O. REVEIL, M. D., PARIS.

16. R. Extracti hyoscyami,
Zinci valerianatis, \mathfrak{ss} . $\mathfrak{z}\mathfrak{ss}$
Bismuthi subnitratiss, $\mathfrak{z}\text{j}$. M.
Divide into 40 pills. Three or four a day.

17. R. Extracti hyoscyami, $\mathfrak{z}\mathfrak{ss}$
Ferri valerianatis, $\mathfrak{z}\text{j}$. M.
Divide into 40 pills. One thrice daily in the chorea of chlorotic patients.

18. R. Valerianæ pulveris, $\mathfrak{D}\text{ij}$
Belladonnæ radialis pulveris, $\text{gr.}\text{ij}$
Castorei pulveris, $\text{gr.}\text{iv}$
Sacchari, $\mathfrak{z}\text{iss}$. M.
Divide into 20 powders. One five times a day.

DR. H. ROYER, FRANCE.

19. R. Sodii arseniatis, $\text{gr.}\text{j}$
Syrupi acaciæ, $\text{f.}\mathfrak{z}\text{iv}$. M.
Dessertspoonful thrice daily.

with tonics. Mental excitement should be guarded against, and nutritious food and exercise in the fresh air insisted upon.

PROF. TROUSSEAU, PARIS.

23. R. Strychniæ sulphatis, gr. j. M.
Syrupi, f. ʒiijss.

A teaspoonful thrice daily; the dose to be gradually increased until itching of the scalp and slight stiffness of the masseter muscles are observable.

This remedy must be employed with caution.

JAMES TURNBULL, M. D., LIVERPOOL.

24. R. Anilinis sulphatis, ʒss.
Divide into 20 powders, one to be taken three times a day.

The sulphate of aniline has also been given in as large doses as three grains every third hour. (*Half Yearly Compendium of Medical Science*, January, 1869). It is a white powder, easily taken.

M. WENZ, M. D., DORSBACH.

Local anesthetization of the skin over the spine has been employed with success in chorea. RICHARDSON'S apparatus is used, with from fifteen to thirty drachms of ether, slowly traversing, once a day, the whole length of the spinal column. (*Aerytliches Literaturblatt*, July 7th, 1871).

HOSPITAL FOR SICK CHILDREN, LONDON.

A large number of cases of chorea have been treated (*The Lancet*, October 21st, 1871) with gradually increasing doses of *sulphate of zinc* at this hospital. In no single case was its use unattended with some advantage, for those patients who did not entirely recover on sulphate of zinc only, appeared to derive considerable benefit from it. In some cases, recovery followed its exhibition with remarkable rapidity, and in others, it succeeded after the failure of many other remedies. The tolerance of the drug which may be established in what would appear to be decidedly emetic doses, is well shown in every case. The mode of administration in this hospital is as follows:—

25. R. Zinci sulphatis, gr. viij-xvj M.
Aquæ, f. ʒiv.

A tablespoonful three or four times a day, *after a meal*.

Occasionally to this is added, in anæmic patients, a grain or two grains of *sulphate of iron*.

The quantity of zinc is then increased by the addition of a grain every day, or every other day, until either the choreic movements have very decidedly diminished, or until the medicine has caused excessive sickness, when either the quantity is gradually lessened or its use is at once discontinued.

As regards diet and confinement to bed, the children have usually been kept recumbent, and fed on pounded meat, or beef-tea and milk, during the earlier stages of the treatment; but as the irregular movements decreased, and without reference to the quantity of zinc then taken, they have been put upon meat diet and allowed to get up. Stimulants, too, have always been allowed in those cases which appeared to require them. One fact has often been noticed—namely, that if no other treatment be adopted than mere confinement to bed, the choreic movements will often frequently diminish in a marked degree during the first week or ten days, after which no further improvement takes place.

Whether the sulphate of zinc acts as a nervine tonic, or whether, as Dr. WEST has expressed his opinion, in his lectures at the College of Physicians, it may exert “a specific power over chorea,” is a question which still awaits decision.

HÔPITAL DES ENFANTS, PARIS.

The means of treating chorea more particularly employed at this hospital, are the *tartar emetic* plan advocated by GILLETTE, and still employed by ROGER; *gymnastics* advocated by BLACHE; and *sulphurous baths*. The tartar emetic plan is this: Three days' treatment: during the first day, 3 to 6 grains of the remedy (according to age); during the second, 5 to 10 grains; during the third, 8 to 12 grains; then three days' rest; then three days' treatment; commencing the new series with a dose one grain stronger than in the first series—to end with a third turn, often attended by good effects. Gymnastics are highly beneficial in milder cases of chorea, and in the declining stage of the severer forms. As much may be said of sulphurous baths. The other means employed at the hospital are: *Opium*, *chloroform inhalations*, *salt baths*, *hydrotherapy*, *tonics*, etc. Strychnia, so warmly advocated by Prof. TROUSSEAU, is scarcely ever employed at the Hôpital des Enfants.

RÉSUMÉ OF REMEDIES.

* *Acidum Arseniosum* is highly recommended by Drs. C. B. RADCLIFFE (F. 15); THOMAS KING CHAMBERS (F. 7); THOMAS HILLIER (F. 11); S. RINGER; ROMBERG, and others.

Dr. BEEBIE, who, in an experience of thirty years, states that he has never known it to fail, prescribed five drops of Fowler's twice daily, after a meal, and added one drop to the dose every day, until the specific effects appeared, when he suspended it for a time.

Æther as well as chloroform inhalations are employed. *Æther* is also applied in spray along the spine.

Ammonii Carbonas is favorably mentioned by Dr. C. B. RADCLIFFE.

Ammonii Valerianas has been employed with success.

Anilin, first employed by Dr. JAMES TURNBULL (F. 24), is also recommended by Dr. F. E. ANSTIE.

Antimonii et Potassii Tartras is recommended by Dr. C. WEST in acute cases, given in full doses. Dr. THOMAS HILLIER, however, condemns its use (which he has found inutile), as a depressing remedy, ill adapted to a disease like chorea of weakly, badly-fed children. In French practice it is advocated by GILLETTE and ROGER (p. 28).

Apomorphia has had a limited but favorable trial in this disease.

Argenti Nitras is much less employed than formerly, before the discovery of other remedies of greater efficiency.

Assafœtida has been recommended in cases due to the irritation of intestinal worms.

Belladonna, though formerly much employed, is characterized by Dr. THOMAS HILLIER as of "little or no service," and such seems to be the general modern verdict.

Brominium, see *Potassii Bromidum*.

Camphora is a remedy in which Dr. C. B. RADCLIFFE states he has considerable confidence. He gives it generally, dissolved in cod-liver oil (F. 5, 6, 11).

Cannabis Indica has been found useful in some cases. Drs. C. B. RADCLIFFE and THOMAS HILLIER, however, hold it in light estimation. In the sleeplessness attendant upon severe chorea the tincture has proved an excellent hypnotic, in full doses.

Chloral, by its hypnotic effect and the consequent ameliorating influence of the sound sleep it produces, has been found of benefit in many cases.

Chloroformum Purificatum. Chloroform inhalations are not approved of by Dr. C. B. RADCLIFFE, unless alcoholic stimulants are given before the inhalation. Friction along the course of the spine night and morning, with a liniment composed of equal parts of chloroform and oil of almonds, is beneficial in some cases.

* *Cimicifuga* is highly recommended by many physicians. Prof. A. STILLÉ considers it as one of the most valuable remedies in this disease in purely uncomplicated cases, given in doses of sufficient strength to develop its specific effects. Dr. SYDNEY RINGER, however, finds it only effectual in cases of rheumatic origin, and even in these he prefers arsenic (F. 10, 20).

* *Conium* is very highly lauded by Dr. JOHN HARLEY. He gives the succus in full doses, and asserts that, apart from its effects on the motor centre, conium possesses no direct influence on the circulatory, nutritive or secretory functions, and that its use can be prolonged with safety, it being entirely destitute of any cumulative action.

Cupri Sulphas has been thought useful, but is doubtless of less value than conium, and a number of other remedies.

Cuprum Ammoniatum once enjoyed a high reputation in the purely nervous form of chorea (F. 9).

**Ferri Bromidum*. This remedy is much used by Prof. DA COSTA. He was led to it almost accidentally at first, but having now used it for three or four years, his experience from the treatment of a large number of cases giving abundant opportunity to witness its good effects, induces him to like it better than any other one article in the treatment of chorea. It should be given in increasing doses, never starting with less than five grains for a child, and rapidly increasing the dose to twenty, thrice daily. It may be given in plain syrup and water, in the form of a pill, or better, in an effervescing powder. It not only affects the chorea, but also influences the nervous system as a sedative, quieting it and giving the patient rest. It is a valuable agent in treating the incontinence of urine in children, and it was in a case of this kind, complicating chorea, that he first observed its value; being surprised and pleased to see that, as the symptom which led to its administration improved, the chorea also diminished, and soon disappeared. Since then he has used it almost continuously. In answer to the question whether it is the bromine or the iron that benefits, he thinks it is the combination; that neither *alone* accomplishes the result; for it will benefit cases that have previously taken iron without improvement, and, as regards the other bromides, we certainly cannot claim for them any especial value in chorea, as they frequently disappoint us. The remedy occasionally fails, as all remedies sometimes do in this obstinate affection, but it certainly is one of the most valuable agents we possess for the treatment of chorea.

Ferri Carbonas is often a useful remedy.

Ferri Oxidum Hydratum in large doses (ʒss-j increased to ʒiij-iv, every six hours) is highly recommended by Drs. ELLIOTSON and WILKS, conjoined with the use of active purgatives. Children readily take half-drachm doses in treacle. *Ferri et Quiniae Citras* has also been found useful.

Ferrum Redactum has been given with benefit (F. 21).

Hypophosphites are recommended by Dr. RADCLIFFE, combined with cod-liver oil.

**Morrhuae Oleum* is very favorably spoken of by Drs. F. E. ANSTIE, C. B. RADCLIFFE and THOMAS HILLIER, in cases of chorea in scrofulous children or those of spare habit. Dr. RADCLIFFE generally gives the oil in conjunction with hypophosphite of soda (gr. v-viij), making the draught containing the hypophosphite the vehicle for the oil. Sometimes he adds carbonate of ammonia to the solution of the hypophosphite; and sometimes dissolves camphor in the cod-liver oil, thus masking the taste of the oil and making the stomach more tolerant of it.

Moschus has been employed with benefit, but generally fails.

Nux Vomica was employed by ROUGIER in minute doses gradually increased. TROUSSEAU preferred strychnine sulphas (which see).

Oleum Terebinthinæ is sometimes given with the view of obtaining its anthelmintic, purgative and stimulant effects.

Opium is tolerated in very large doses in this disease, but Dr. RADCLIFFE's experience is not favorable to its use.

Phosphorus is favorably reported upon, by a number of physicians, as a remedy in this disease.

Physostigma has been used with success by Drs. HARLEY and OGLE (F. 14).

**Potassii Sulphuretum*. Drs. HILLIER and VON NIEMEYER recommend baths of this salt (F 13).

Potassii Bromidum has proved a failure in the hands of Dr. RAMSKILL, but has been favorably reported upon by a number of French physicians.

Potassii Iodidum is considered useful by Dr. HILLIER, in cases of chorea occurring in children subject to chronic rheumatism (F 11). It is also beneficial in patients tainted by syphilis or scrofula.

Quiniæ Sulphas has been employed in some cases with advantage (F. 21).

**Santonin* proves often valuable, by disclosing the unsuspected cause of the choreic movements, viz., worms.

Sodii Arsenias is useful in those cases in which other arsenical preparations are badly borne (F. 19).

Stanni Chloridum has been employed in doses of gr. $\frac{1}{4}$ to $\frac{1}{2}$ three times a day in pill, or dissolved in hydrochloric ether. If it increase the symptoms at first, this is regarded as a good omen. If it be followed by gastro-intestinal irritation or dryness of the throat, it must be stopped or the dose lessened.

Stramonium is of doubtful efficacy in chorea.

Strychniæ Sulphas is recommended by TROUSSEAU (F 23). Its effects should be carefully watched, and its administration confined to obstinate chronic cases (F. 12).

Valeriana is recommended by some writers (F. 18).

Zinci Oxidum is generally considered inferior to the sulphate of zinc.

**Zinci Sulphas* is very highly recommended by some physicians (BARLOW, GOLDING BIRD and WEST), but in the hands of others (STONE, HILLIER, etc.), it has not fulfilled expectations (p. 22, F. 21, 25).

Zinci Valerianas is employed by Prof. DA COSTA and others (F. 8, 16).

**Cathartics*, when combined with antispasmodics and tonics, give better results than can be obtained from either singly. The tendency to constipation which exists in this disease requires to be combated by their administration.

EXTERNAL REMEDIES.

Electricity is principally useful in cases dependent upon deranged catamenial function. Dr. GOLDING BIRD recommends it in the form of sparks taken in the course of the spinal column, every alternate day, for about five minutes at each time.

Ether Spray. The application of atomized ether along the spine has proved of service in relieving the spasms, especially in recent cases and those originating in fright. It is said also to be of benefit in chronic cases and in rheumatic chorea (p. 27).

Frigus. *Cold Shower Baths* are often valuable adjuncts to other treatment. Dr. HILLIER considers them useful in the later stages of the disease, when the patient is not too timid or too much excited by them; *cold effusions* to the back of the head and neck, each morning, are also useful, but rarely proper in the winter season, and seldom applicable to very feeble and excitable children.

Hygienic Measures. Fresh air, change of scene, regulated movements, good food and friction to the spine are of the utmost importance in all cases. Gymnastics are especially recommended in the milder forms of chorea, and during convalescence in the severer cases (p. 28).

Sulphur Baths are often of value in conjunction with other remedies (F. 13). They are particularly indicated when there is anæmia.

Vapor Baths are also useful.

DELIRIUM TREMENS.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

The two indications for treatment are: 1. The elimination of the poison; 2. The sustenance of the patient during this period. Our author opposes bleeding and the administration of opiates or stimulants in large doses. The strength is to be supported by *nutritious diets*, such as yolk of eggs, soups, beef-tea, and egg-flip, in small quantities and often.

The danger in the first instance is from exhaustion, which is to be met by careful nursing. *Opium* may only be administered in protracted cases, and then never in doses larger than would be considered safe for a healthy person of the age and sex of the patient.

G. H. BARLOW, M. D., LONDON.

- | | | | |
|--------|---------------------|--------|-----------|
| 26. R. | Camphoræ, | gr. ij | |
| | Ammonii carbonatis, | gr. iv | |
| | Tincturæ hyoscyami, | | |
| | Tincturæ lupulinæ, | | |
| | Syrupi aurantii, | | |
| | Mucilaginis acaciæ, | ss. | f. ʒj. |
| | Aquæ camphoræ, | | f. ʒj. M. |
- For one dose, to be taken at bedtime, after the action of an aperient.

J. WARING CURRAN, M. D., DUBLIN.

- | | | | |
|--------|--------------------|-------|----|
| 27. R. | Zinci oxidi, | ʒj-ij | |
| | Confectionis rosæ, | q. s. | M. |
- For 10 pills; one thrice daily.

When morphia or cannabis has done its duty in this disease, the after treatment by oxide of zinc is something to be observed rather than described; the constant dread, restlessness, and disturbed sleep are quickly overcome by the bracing agency of the drug (London *Lancet*, October 24th, 1868). In administering the oxide of zinc, care must be taken not to give it upon an empty stomach, as it produces nausea and a dislike for the medicine.

• PROF. R. J. GRAVES, M. D., DUBLIN.

- | | | | |
|--------|----------------------------------|------------|----|
| 28. R. | Antimonii et potassii tartratis, | gr. iv | |
| | Tincturæ opii, | f. ʒj | |
| | Camphoræ, | gr. xv | |
| | Alcoholis, | f. ʒss | |
| | Aquæ destillatæ, | f. ʒ viij. | M. |

Powder the camphor by the aid of the alcohol, add the water, pass through a piece of fine linen and then add the tartar emetic and the laudanum. Give a tablespoonful every two hours.

G. M. JONES, M. D., JERSEY, ENGLAND.

29. R. Tincturæ digitalis, f.℥iiss. M.

A tablespoonful (f.℥ss.) to be given at a dose, mixed with a little water. If the first be not sufficient, which, however, it generally proves to be, a second, equally large, is to be administered in about four hours. If a third dose be, in rare instances, required, it should not exceed a dessertspoonful (f.℥ij).

Under the influence of this medication, it is stated, the pulse becomes fuller, stronger, and more regular, the skin grows warm and the cold clammy perspiration ceases. These effects are followed by a sleep of several hours' duration. No action on the kidneys nor any alarming symptoms are observed.

Dr. T. HAWKES TANNER confirms the above statements.

This treatment answers best when the symptoms have assumed a resemblance to those of acute mania, and when there has not been much exhaustion.

DR. LYONS, HARDWICKE HOSPITAL, DUBLIN.

30. R. Pulveris capsici, gr. xx-xxx
Mellis rosæ, q. s.
Make a bolus.

For one dose.

This usually suffices to produce quietude and sleep. In exceptional instances, however, a second and even a third dose is required before full tranquillity is secured. The drug is well borne, and quiets the stomach in cases in which irritability and vomiting are present. Our author sums up (*British Medical Journal*, November 7th, 1869), his experience as follows: 1st. Capsicum is a valuable and reliable drug when opium fails or is for any cause contra-indicated. 2d. It is a safe drug for general employment in delirium tremens, and as such may be confidently recommended. 3d. It is not open to the objection which attaches to the continued use of opium, which, when it fails to tranquilize and produce sleep, adds to the state of excitement, and when pursued beyond a certain limit may induce opium coma. 4th. Capsicum has been employed in the delirium of fever when opium has failed to cause sleep, and with marked success in certain cases.

As a member of the family of solonaceous plants, capsicum might, *a priori*, have been expected to contain a narcotic principle. As yet the alkaloid in which it resides has not been isolated; but in some researches, conducted at the request of Dr. LYONS, M.

ALPHONSE GAGES, a distinguished member of the chemical staff of the College of Sciences for Ireland, has found sufficient indications of its presence to warrant him in predicting its ultimate detection and isolation. It will, Dr. LYONS expects, form a valuable boon to practical medicine when eliminated from the acrid oils of the capsicum fruit.

H. S. PURDON, M. D., LONDON.

Our author finds (*Medical and Surgical Reporter*, August 1st, 1874), in the treatment of this disease, *nourishment*, such as plenty of milk, eggs, and in some cases, a moderate allowance of stimulants, necessary. He has remarked that when the patient is pale, thin, and not a confirmed tippler, GRAVES' plan of treatment (see p. 32), by tartar emetic and opium, succeeds very well; however, opium sometimes stimulates, even when guarded with antimony. A good *purgative* is a capital preparation for this or any plan of treatment. *Chloral* is useful, but does not always agree, and often seems to stimulate the heart and brain. *Red pepper*, in twenty grain doses, has not succeeded in his hands, nor has *bromide of potassium*. He has had no experience of the *tincture of digitalis* in half ounce doses, as recommended by JONES, of Jersey (see p. 33), nor of the hypodermic injection of *caffein*. For the tremor and unsteadiness that remain after an attack, the *oxide of zinc*, in two grain doses, thrice daily, has done good, or if the appetite is bad, *quinine*, given with the *ammoniated tincture of valerian*, may be ordered.

RÉSUMÉ OF REMEDIES.

Käfer, by inhalation, has been recently recommended. When the pulse is weak, the extremities cool, and the patient restless rather than violent, it should not be pushed to full anaesthesia.

* *Alcohol*. There is a wide difference of opinion in the profession, in regard to the use of stimulants in this affection. Most practitioners, however, regard the sudden withdrawal of accustomed stimuli as injurious and dangerous. ANSTIE is among those who are of the opinion that in first attacks in young subjects, it is proper to abstain altogether from the use of alcohol, and in every case to abstain as long as possible. When deemed indispensable, alcoholic stimulants should be conjoined with nutritives, *i. e.*, in the form of milk punch, egg flip, etc. (Kraus) obtains satisfactory results by simply continuing the use of alcoholic stimulants in moderate quantity. FLINT says that so long as the affection continues, it is, in general, injudicious to discontinue the use of stimulants, which must be given freely when the symptoms denote failure of the vital powers. After sleep has been secured, and the patient is convalescent, the habitual use may be broken up with safety. STRICK states that alcohol acts as a specific

cure. In mild cases, he prefers porter to distilled liquors, on account of the narcotic and tonic elements it contains; in severe ones the stronger preparations of alcohol are alone effectual. Wine may be used with advantage, but is less resorted to than brandy or whisky.

Ammonii Bromidum has been employed with good results in delirium tremens by Dr. PEACOCK (*British Medical Journal*, July 3d, 1869).

Anthemis, in an emetic dose, may be given at the commencement of an attack.

Antimonii et Potassii Tartras is much employed by German physicians in this affection, but little used in America or England, excepting in combination with opium, when it often induces sleep after the failure of opium alone (F. 28).

Atropia, hypodermically, is recommended by BARTHOLOW when there is obstinate insomnia with great restlessness, weakened action of the heart, coldness of the surface, clammy sweat, with a failure of nutrients, bromide of potassium, chloral and hypodermic injections of morphia.

Belladonna has been suggested as a remedy when the pupil is greatly contracted, but there is yet little clinical evidence as to its utility.

Brominium, see *Potassii bromidum*.

Camphora is recommended by Dr. LAYCOCK in those cases occurring in persons of a nervous habit, where the exhaustion is great, and morphia inadmissible. Two to three grains may be given every third hour, alone, or combined with carbonate of ammonia and hyoscyamus (F. 26).

Caffein, hypodermically, has been recommended.

Cannabis Indica is regarded by Dr. ANSTIE as preferable to opium when there is any reason, from the quality of the pulse, to believe the circulation much enfeebled. He prescribes gr. $\frac{1}{4}$ — $\frac{1}{2}$ of a good extract. H. J. TYRELL records (*Medical Press*, March 13th, 1867), a case of delirium tremens, in which, after three doses of ℥xx of the tincture of cannabis indica, every third hour, the benefit was marked after the failure of capsicum, and when opium was contra-indicated.

**Capsicum* in large doses is strongly recommended by Dr. LYONS and others (F. 30).

**Chloral* has proved of benefit through its hypnotic influence. It may be given by the mouth or hypodermically. (LANGENBECK, of Berlin).

Chloroformum by inhalation has been recommended by some, but most writers are of the opinion of Dr. WILKS (*Medical Times and Gazette*, September 19th, 1868), that "you may quiet the patient by it for a time, but you do not in any way influence the disease." Dr. ANSTIE mentions two cases of death from cardiac palsy while the inhalation was proceeding. Internally, Dr. GOODFELLOW recommends (*British Medical Journal*, July 3d, 1869), the following formula for the administration of chloroform:—

31. R.	Chloroformi,	℥xx	
	Quinæ sulphatis,	gr. ij	
	Tincturæ cardamomi compositæ,	f. ʒj	
	Aquæ,	f. ʒx.	M.

For one dose.

Cinchona in strong infusion is said to act very happily in this disease and in the tremulousness which affects habitual drunkards.

Conium is recommended by Dr. HARLEY, in combination with opium, thus:

32. R.	Succi conii,	f ʒiv-vj-vij
	Tincturæ opii,	℥xx-xxx.

For one dose.

**Digitalis* in large doses is recommended by Dr. JONES (F. 29), and others.

Hydrargyri Chloridum Mite in full purgative dose, repeated if necessary, is useful in those cases in which there is hepatic congestion or abdominal plethora, when its action is sometimes followed by sleep, after the failure of opium to produce it.

Hyoscyamus is favorably spoken of by Dr. BARLOW (F. 26), and others.

Ipecacuanha in full doses (gr.xx every fifteen minutes until emesis is produced) is the practice of Dr. SCHENCK, of Osage City, Kansas (New York Medical Journal, October, 1873).

Lupulina is recommended in tincture by Prof. G. B. WOOD, as an admirable adjunct to opium, the combination succeeding, after the failure of opium alone to induce sleep. During convalescence from this disease, he considers it as one of the best remedies which can be employed to sustain a moderate tonic and soporific influence.

Morphia hypodermically is recommended by Dr. ANSTIE and others. The former says that opium should never be administered by the stomach, but always in the form of morphia hypodermically injected, in the dose of gr.℥-½-½.

Opium is no longer employed indiscriminately in heroic doses in every case of delirium tremens. To give it in large and repeated doses, on the principle that sleep must be produced at all hazards, is to run the risk of killing the patient. Dr. ANSTIE (*The Practitioner*, July, 1868) asserts, that great mischief was formerly done by the custom of plying the patient with larger and larger successive doses of opium, to drown the delirium in narcotic stupor, and says that opiates should never be given by the mouth when the hypodermic injection of morphia is possible. Prof. GRAVES recommends, in young, robust subjects, when there is much vascular excitement, the following combination :

33. R. Tincturæ opii,
Vini antimonii, ℥℥ ℥xx.

To be repeated every three or four hours, according to circumstances.

When the patient is old, and when there is much depression, the opium may be advantageously combined with carbonate of ammonia (grs.iiij-iv) or quinine (grs.ij-iiij), or with camphor. Chloral as a hypnotic promises to supersede opium in this disease. Prof. STILLÉ says the best method of administering opium in delirium tremens is to begin with gr.℥ or its equivalent, and progressively augment the dose by small and hourly additions until sleep is produced, or a sufficient degree of tranquillity obtained.

**Potassii Bromidum* is recommended by Dr. RINGER as of conspicuous benefit, by removing the delusion, calming the delirium and procuring sleep in the earlier stages of the disease, before the delirium has become furious. It is also of service in removing any delusions that may remain after the attack has been partially subdued. It should be given in doses of from twenty to thirty grains, or even larger, every two hours till sleep ensues. Unfortunately, it is not uniformly beneficial, and in some cases it seems entirely inert.

**Quiniæ Sulphas* is the nervine tonic in which Dr. ANSTIE has the most confidence, in grain doses two or three times daily. It should be given from the first, if possible, being, if the stomach is very irritable, administered in effervescence with bicarbonate of potash and citric acid. Its superior efficacy in producing that nervous tranquillity which makes sleep possible is very marked. When it fails he advises sulphuric ether ℥ xxx thrice daily, or

34. R. *Ætheris sulphurici*, f.3j
Tincturæ sumbuli, ℥xxx. M.

For one dose at bedtime.

Sinapis. In that stage when a timely emetic will cut short the attack, none is so appropriate as mustard.

Valerian is a valuable adjunct to treatment, and often effective alone in slight cases.

* *Zinci Oxidum* is recommended in delirium tremens, after opiates have done their work, by Dr. WARING CURRAN, and others.

Cathartics are of service at the outset in the young and robust, when the attack results from the ingestion of a large quantity of spirits, but in the old, broken-down, habitual drunkard they are contra-indicated.

Emetics have recently been re-introduced in the treatment of this disease. At the beginning of the attack, when there is reason to suppose that the stomach contains a large amount of spiritous fluid, they are useful, but otherwise they are inferior to the supporting plan of treatment.

Stimulants, see Alcohol, above.

EXTERNAL REMEDIES.

Hypodermic Injections. *Atropia*, injected in a dose not exceeding gr. $\frac{1}{4}$ at one time, is recommended by Prof. BARTHOLOW in certain cases (see p. 35); *Caffein*, in the dose of gr. j of the citrate, dissolved in glycerine, has been employed with good effects; *Chloral* has been recommended, but its use, hypodermically, is objectionable, on account of the local irritation it occasions and the eschars which may result; *Morphia*, the use of which, hypodermically, in delirium tremens, was first suggested by HUNTER, is advised by OGLE, SEMELEDER, LOVENT, EULENBERG, RUPPNER, ANSTIE and others. The practitioner should be warned, however, against abusing this remedy (see Opium, p. 36). Prof. BARTHOLOW gives the following as the indications for the use of morphia, hypodermically, in this disease: the condition of "horrors," or wakefulness, preceding delirium; excessive and uncontrollable vomiting of food, drink and medicine; mild cases, in which there is little tendency to depression of the vital forces, and in which the assimilation of food proceeds satisfactorily. The following are the contra-indications for the use of this method: severe and protracted cases, with great depression of the vital forces and non-assimilation of food; cases in which serious organic lesions of liver and kidneys have occurred; cases in which the attack is consecutive to traumatic or other serious lesion of brain.

Ice to the shaven scalp is sometimes of benefit, when there is much vascular excitement, but is to be employed with caution in the case of habitual, debilitated drunkards, and in no instance to be too long continued, lest dangerous depression should result. Dr. CHAPMAN'S spinal ice bag exercises a favorable influence in some cases.

Wet Sheet Packing is of great value in delirium tremens. The patient, stripped naked, is rolled in a wet sheet, and then a blanket wrapped around this. So soon as a hot vapor surrounds the patient he falls, in many cases of delirious excitement, into a quiet sleep.

EPILEPSY.

PROF. C. E. BROWN-SÉQUARD, M. D.

35. R.	Potassii iodidi,		
	Potassii bromidi.	ss	3j
	Ammonii bromidi,		3ss
	Potassii bicarbonatis,		3ij
	Infusi calumbæ,		f.3vj.
			M.

A teaspoonful before each of the three meals, and three tablespoonfuls at bedtime, with a little water.

The above is given in cases of idiopathic epilepsy, in which patients derive no benefit, or have ceased to have any, from the bromide or iodide of potassium alone or combined, or of the bromide of ammonium alone.

When the patient's pulse is weak, substitute for the bicarbonate of potassium in the above formula the carbonate of ammonium, and for the six ounces of infusion of columbo, an ounce and a half of the tincture of that medicine, with four ounces and a half of distilled water.

Dr. BROWN-SÉQUARD gives the following very important *rules relative to the treatment of epilepsy by the bromide of potassium and ammonium*, employed together or separately.

1. That the occurrence during the day of the sleepiness caused by these remedies can be avoided by giving relatively small doses in the daytime and a much larger dose late in the evening.

2. That the quantity of these medicines to be taken each day must be large enough to produce an evident though not complete anæsthesia of the fauces and upper parts of the pharynx and larynx; that daily quantity being from 45 to 80 grains of the bromide of potassium, and from 28 to 45 grains of the bromide of ammonium, when only one of these salts is employed, and a smaller quantity of each, but especially of the second, when they are given together.

3. That an acne-like eruption on the face, neck, shoulders, etc., should be produced, and it is most important to increase the dose when there is no eruption, and also when the eruption is disappearing, unless the dose already given in the twenty-four hours is so large that any increase of it causes great sleepiness in the daytime, a decided lack of will and of mental activity, dullness of the senses, drooping of the head, considerable weakness of the body, and a somewhat tottering gait.

4. That it is never safe for a patient taking either of the bromides or both, and receiving benefit therefrom, to be even only one day without his medicine, so long as he has not been at least fifteen or sixteen months quite free from attacks.

5. That the debilitating effect of the bromides in patients already weak, as are most epileptics, ought to be prevented or lessened by the use of strychnia, arsenic, the oxide of silver, ammonia, or cod-liver oil, cold douches or shower baths, and, of course, wine and a most nourishing diet. In making use of strychnia or arsenic, it must be kept in mind that not only the bad influences of the bromides, but also their favorable influence against epilepsy, can be diminished by these powerful agents (especially strychnia), and that it is therefore necessary, when these agents are used, to increase the dose of the bromides.

6. That *iron* and *quinine*—which are generally injurious to epileptics, except in cases in which the nervous affection is caused, or at least aggravated, by chlorosis, anæmia, or malarial cachexia—are more particularly injurious in cases in which the bromides are taken.

7. That a gentle purge every five or six weeks usually gives a new impulse to the usefulness of the bromides against epilepsy.

36. R. Morphine sulphatis, gr. $\frac{1}{2}$
Atropine sulphatis, gr. $\frac{1}{20}$ M.

For one *hypodermic injection*, in a few minims of distilled water.
Our author has succeeded in curing a case of epilepsy by the use of this injection.

Inhalation of Chloroform.—In a case of a gentleman who had pretty regular weekly attacks of epilepsy, our author employed chloroform by inhalation, almost without interruption, for two or three days successively, with the object of preventing the expected fit or fits. It was of the greatest importance in that case to prevent a fit, as the patient, in a preceding attack, had fractured and dislocated one of his arms. The inhalation of chloroform saved him from the expected attack, and the callus had time to be formed before he had another fit.

GEORGE JOHNSON, M. D., *King's College Hospital, London*, also speaks in high terms of chloroform in connection with bromide of potassium in this affection. He thinks that the action of chloroform inhalation in warding off a threatened fit and in cutting short

a violent and prolonged paroxysm, is as uniform and certain as the action of anæmia in exciting convulsions.

THOMAS HAWKES TANNER, M. D., London, has also used the vapor of chloroform, and believes that the fits have diminished, both in severity and numbers, from its employment.

J. PHILPOT WEBB, M. D., of Nevada City, California, *Licentiate of the Royal College of Physicians of Edinburgh, etc.*, has recently reported a case of epileptiform convulsions arrested by chloroform inhalation in a boy aged fifteen.

Mechanical and Physical Means.—Dr. BROWN-SÉQUARD has found: 1. That it is not necessary to apply an irritation (by a ligature, pinching, etc.), on the very limb from which an aura seems to start, as the same means applied elsewhere may succeed; but the chance of success is much greater by the former than by the latter way.

2. That a constant or a frequent irritation (by a blister, an issue, a seton, the actual cautery, etc.), on the place from which an aura seems to start, may not only prevent fits, but, by some change of nutrition locally (if the aura is really of peripheric origin), and in the nervous centres, may reduce or even destroy altogether the tendency to fits, and lead to a complete cure.

3. That as a circular ligature may procure a temporary good effect, so a narrow *circular blister* applied all around a limb, a toe, or a finger, or a circular cauterization with a white-hot iron, may cure epilepsy in cases with a distinct aura.

4. That even in cases in which there is no aura, felt or unfelt, ligatures, pinching, and other means of irritation, may prevent the occurring of expected fits.

When an attack of epilepsy is followed by a comatose state, or even a sleep with heavy breathing, it is of the greatest importance to place the head of the patient in such a position that the tongue, which is then paralyzed, will not fall on the larynx and cover its aperture.

T. S. CLOUSTON, M. D., EDINBURGH.

From extensive and very elaborately conducted experiments, to determine the precise effect of bromide of potassium in epilepsy, and its proper dose, Dr. CLOUSTON found that the diminution of the fits, and all the other good effects of the medicine reached their

maximum in adults, at thirty-grain doses thrice daily; while ill effects were manifested when thirty-five grain doses thrice daily were reached.

J. WARING CURRAN, M. D., DUBLIN.

37. R. Zinci oxidi, gr. iijss
Extracti glycyrrhizæ, q. s. M.
For one pill. One or two thrice daily.

This, together with the bromide of potassium in mixture, forms a method of treatment not to be equaled in epilepsy, when assisted by the occasional application of *Chapman's spinal ice bag*. Neither remedy succeeds so well alone; the one is essential to the other.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

38. R. Zinci valerianatis, gr. iij
Extracti belladonnæ, gr. ½
Pulveris digitalis, gr. ¼. M.
For one pill. To be taken thrice daily in cases of epilepsy, associated with irregularity of the heart.

PROF. WM. A. HAMMOND, M. D., NEW YORK.

In regard to the dose of bromide of potassium in epilepsy, Dr. HAMMOND states that the symptoms due to large doses of the bromide may be enumerated as follows, in the usual order of their occurrence: 1. Contraction of the pupils; 2. Drowsiness; 3. Weakness of the arms and legs; 4. Depression of mind; 5. Failure of memory; 6. Delusions. The first three of these are the usual accompaniments of a dose of the medicine capable of producing any influence over epilepsy. In adults they never follow less doses than ten grains. Doses of five grains produce no effect.

MARSHALL HALL, M. D., LONDON.

39. R. Strychniæ acetatis, gr. j.
Acidi acetici, mxx
Alcoholis, f. ʒij
Aquæ destillatæ, f. ʒvj. M.
Ten drops (gr. ½) to be taken in water thrice daily.

J. SPENCE RAMSKILL, M. D., LONDON.

40. R. Bruciæ, gr. iv
Alcoholis, f. ʒij
Aquæ destillatæ, f. ʒvj. M.
Ten minims to be taken diluted with water twice daily: every third day an addition of five minims should be made to the dose, until from a third to a half grain is reached, in the treatment of stomachal epilepsy.

If any stiffness of the jaws or other toxic symptoms appear, the dose is to be diminished five minims, and continued until any new objectionable symptom is manifested; then it is again lessened. No benefit will be derived until a full dose is reached; often the reverse effect (London *Lancet*, January 16th, 1869). As a rule, patients will take twice as much brucia as strychnia without any necessity for diminishing the dose. After the continuous administration of brucia for a month, it is well to suspend its use for some days, and then again resume it. Great satisfaction will be obtained by giving the bromide of potassium in large doses at bedtime, and at the same time ordering brucia twice daily, thus insuring the sedative influence of the bromide and the tonic effect of the brucia on the whole nervous system.

DR. SCHMITT, GERMANY.

41. R. Tincturæ iodinii, gtt.xv
 Aquæ menthæ piperitæ,
 Aquæ destillatæ, aa f.ʒij
 Syrupi, f.ʒj. M.
 A tablespoonful every two hours, to prevent the return of an attack.

42. R. Tincturæ iodinii, f.ʒj
 Alcoholis diluti, f.ʒss
 Spiritûs calamûs, gtt.j. M.
 Five drops, every two or three hours, in sweetened water, to prevent a return of an attack.

WALTER TYRRELL, M. D., LONDON.

Our author states that he has watched the effects of strychnia upon various forms of epilepsy, and has no hesitation in affirming that in a large majority of cases its effects are most beneficial. He found but three cases in which it produced no favorable result, and no cases in which it produced an unfavorable effect. He gives a medium quantity as a dose, for a lengthened period, rather than carrying the dose too high at first. The best results are obtained from gr. $\frac{1}{16}$ to gr. $\frac{1}{8}$, twice a day, in solution, the system appearing to regain its nervous strength under the continued use of the medicine.

HOSPITAL OF DISEASES OF THE CHEST, LONDON.

43. R. Potassii bromidi, gr.x
 Tincturæ conii, ℥xxx
 Tincturæ valerianæ ammoniatæ, ℥x
 Aquæ camphoræ, f.ʒj. M.
 For one dose, thrice daily.

HOSPITAL OF UNIVERSITY COLLEGE, LONDON.

44. R. Potassii bromidi, gr. x
 Spiritus chloroformi, ℥xviii
 Infusi quassia. f. 3j. M.
 For one dose, thrice daily.

RÉSUMÉ OF REMEDIES.

Ammonii Bromidum is often prescribed in epilepsy alone, or in combination with bromide of potassium (F. 35).

Ammonii Carbonas is a valuable palliative, though possessed of no curative influence in this disease. Dr. ANSTIE and others assert that, if there be time to administer a dose previous to an impending attack, it will often avert it. PEREIRA recommends it in large doses (grs. x-xx), in the hysterical form of the disease.

Ammonii Formias has been of service in some forms of epilepsy, hurtful in others. Dr. RAMSKILL advises a further trial of this remedy.

Ammonia Aqua is recommended by Dr. HOPE and others, in epileptic congestion of the brain, arising from debility. The following formula is most efficacious:—

45. R. Aquæ ammoniæ, ℥xij
 Aquæ menthæ viridis, f. 3jss. M.

For one dose. If taken at the first warning of an attack of this character, it seldom fails to arrest its supervention. The inhalation of ammoniacal vapor immediately after the first warning of an attack, is recommended by PEREIRA, PINEL and others, as often averting its occurrence.

Ammonii Valerianas, although very deliquescent, and therefore uncertain in its operation, is favorably reported upon by a number of writers as a remedy in epilepsy.

Anilin is recommended by Drs. TURNBULL and ANSTIE. The latter finds that large doses aggravate the fits, but that one grain thrice daily, with an additional grain on the occurrence of any prodromata of a fit, delays or mitigates the paroxysm, or even averts it for a considerable time.

Antimonii et Potassii Tartras has been used internally, and also in the form of the tartar emetic ointment, to secure pustulation of the scalp and spine.

Argenti Nitras is no longer given in prolonged courses, at the risk of the patient's turning blue, a fate so frequently reserved for epileptics in former times. Other remedies of equal or greater efficacy, and less danger, have now, to a great extent, displaced it.

**Arseniosum Acidum* is employed in epilepsy, but it is much less effective in this disease than in chorea. Dr. RADCLIFFE employs it hypodermically and endermically, in the same manner as for chorea, see p. 25.

Assafœtida is recommended by Dr. POLLOCK (*Lancet*, Aug. 21, 1869), as capable of giving satisfactory results in the following combination:—

46. R. Tincturæ assafœtida, ℥xxx
 Ammonia carbonatis, grs. iij. M.

For one dose, to be repeated thrice daily In cases of epileptic seizures, due to the presence of worms in the alimentary canal, assafœtida is a useful agent.

Barii Chloridum is occasionally employed.

Belladonna, though praised by TROUSSEAU, WILKS and HARLEY (particularly in cases arising from emotional excitement, when it should be combined with zinc) is superseded in practice by the superior claims of bromide of potassium.

Bismuthi Subnitras has been employed by Dr. COPLAND (the bowels being kept freely open) alone and in combination with tonics and antispasmodics, with good results.

Brominium, see *Potassii Bromidum*.

Camphora seems to be useful in cases associated with hysteria or uterine disorders. It should be given in combination with tonics and antispasmodics.

Cannabis Indica has not proved of value in epilepsy.

Cantharis, see External Remedies, Blisters.

Castoreum is a very old remedy in this disease, having been recommended by CELSUS.

Cerii Oxalas is recommended by Prof. SIMPSON.

Chloral sometimes mitigates and even prevents the recurrence of periodical fits, by putting the patient to sleep.

**Chloroformum*. Chloroform inhalations are recommended by Drs. BROWN-SEQUARD (p. 39), JOHNSON, TANNER, WEBB (p. 40) and others, both during the paroxysm and in the interval. Dr. BROWN-SEQUARD considers this method of treatment particularly valuable in cases partaking of a hysterical character.

Cinchona is rarely successful in true epilepsy, but of great benefit in the epileptiform paroxysms of intermittent fever.

Conium has been found by Dr. HARLEY to cause rapid and decided improvement in epilepsy arising from sexual abuse, or from the irritation of dentition, but in that arising from peripheral disorder of sensation, from menstrual irregularity, or from emotion, it fails to exercise any beneficial influence.

Cupri Sulphas has been successfully employed in $\frac{1}{4}$ gr. doses, combined with quinine.

Cuprum Ammoniatum is now not much used in epilepsy.

Digitalis has proved of little service in epilepsy, though it has been recommended in large doses.

Hydrargyri Iodidum Rubrum has been recommended by Dr. FULLER (*Medical Times*, February 14, 1857) in cases where there is reason to suppose thickening of the dura mater.

Hyoscyamus in occasional full doses (℥.ʒiv-viij of the succus or ℥.ʒiv-viij of the tincture) has been found by Dr. HARLEY very serviceable in epilepsy arising from emotional disturbances, but in other varieties of this disease it has proved useless in his hands.

**Morrhuae Oleum* has been employed by Dr. ANSTIE, with encouraging results, in cachectic cases. It must be persevered in for a long time.

Moschus is sometimes useful. Dr. A. T. THOMSON says that it diminishes the violence of the paroxysms of idiopathic epilepsy, and greatly lengthens the intervals, when administered as follows:—

47. R. Moschii,

ʒj.

In a bolus for one dose, every eight hours.

Nitrite of Amyl by inhalation, has been found eminently useful by WEIR-MITCHELL, in a case brought on by inordinate venery.

Nux Vomica. In epilepsy following the disappearance of the menstrual discharge, COPLAND recommends *nux vomica* combined as follows:—

48. R. Extracti nucis vomicæ, gr. x
 Pilulæ aloës cum myrrha, ʒij M.
 For 36 pills. From one to two night and morning. Its employment demands caution.

Opium is now rarely employed, since the discovery of the value of bromide of potassium, in this affection.

Oxygen Inhalations are recommended by Dr. RAMSKILL (*Medical Times*, July 4th, 1863). On the accession of giddiness, or other uncomfortable symptoms, they should be stopped.

Phosphorus is regarded by Dr. ANSTIE as well worthy of further trial in this disease, as it improves the patient's general health and relieves the sense of languor and depression.

Plumbi Acetas was formerly much employed, but is now rarely administered.

***Potassii Bromidum* is the remedy *par excellence* in epilepsy. See opinions already given, of Drs. BROWN-SEQUARD (p. 38), CLOUSTON (p. 40), HAMMOND (p. 41). It cures in very many cases, and rarely fails to diminish the number of attacks.

Quiniæ Sulphas is sometimes prescribed.

**Santonin* is of service when the epilepsy is due to the presence of worms in the alimentary canal.

Sinapis is a useful emetic in epilepsy, for over distention of the stomach.

Stanni Chloridum has been employed in doses of gr. $\frac{1}{2}$ to $\frac{1}{4}$ thrice daily, in pill, or dissolved in hydrochloric ether.

Stramonium is of doubtful efficacy in epilepsy.

Strychnia is strongly recommended by WALTER TYRRELL (p. 42), and in the threatenings of epilepsy, by MARSHALL HALL (F. 39).

Tabacum is supposed to have a curative influence in epilepsy produced by onanism, as the use of tobacco allays sexual lust.

Terebinthinæ Oleum, though little used in epilepsy, is strongly recommended by Sir THOMAS WATSON (who states that if he was called upon to name any single drug from which in ordinary cases he should hope for relief, he should mention turpentine), and by Dr. HEADLAND, who prescribes it as follows:—

49. R. Olei terebinthinæ, f.ʒss
 Thrice daily.

Or

50. R. Olei terebinthinæ, aa f.ʒij. M.
 Olei ricini, aa
 For one dose at occasional intervals.

Valeriana is highly praised as a remedy for epilepsy, by BRISBANE, FOTHERGILL, HALLER, WILLIS, and others, but regarded as of little value by CULLEN, HEBERDEN, and HOME.

Zinci Lactas was first recommended in epilepsy by Dr. HERPIN (*Bull. Gén. de Thérap.*, November, 1856), who regards it as of equal medicinal value with the oxide, and superior to it in taste and tolerance. He gives it at first in two grain doses, in pill, thrice daily, and gradually increases the quantity until ten grains are taken during the day.

**Zinci Oxidum* is regarded by Dr. RUSSELL REYNOLDS as superior to the sulphate of zinc in epilepsy. He gives it in doses of grs. iii-v thrice daily. Dr. WARING CURRAN strongly urges it as an adjunct to bromide of potassium (p. 41).

Zinci Sulphas is a long used remedy in epilepsy, but is now generally considered inferior, in this disease, to both the oxide and valerianate.

Zinci Valerianas is considered by many as the best salt of zinc in epilepsy. It is especially valuable in cases of a hysterical character. The dose should be small at first, one grain, gradually increased as the stomach will bear it. Dr. DA COSTA sometimes prescribes it with belladonna and digitalis (F. 38).

Emetics, given when an attack is imminent, will often, according to Dr. MARSHALL HALL, ward it off.

Sedatives are useful by controlling undue readiness of action of certain portions of the nervous centres.

Stimulants. A draught of wine or of some diffusible stimulant may put off an attack.

EXTERNAL REMEDIES.

Cold Shower Baths are useful in epilepsy when the patient is not too timid nor too much excited by them.

Turkish Baths are sometimes employed, but great caution is required in the use of so powerful an agent.

**Blisters*. A narrow circular blister applied above or at the starting point of the aura will sometimes prevent or modify a paroxysm.

Cathartics are of little service in epilepsy, excepting when the bowels are overloaded.

Dry Cupping, sometimes, according to Dr. GRAVES, averts a paroxysm of epilepsy where previous headache or other premonitory symptoms advertise its approach.

Electricity has given unsatisfactory results in epilepsy. Dr. COPLAND says that "the safest method of employing electricity is to place the patient on the insulating stool and subject him to the electric bath, and to draw sparks from different parts when thus insulated, and placed in connection with the prime conductor."

Forcible Extension of the muscles where the aura is seated, or the application of pressure between the starting point of the aura and the trunk, may avert an attack.

Hypodermic Injections. *Atropia*, subcutaneously, in this disease, was proposed by BROWN-SEQUARD, combined with morphia (F. 36). Prof. BARTHOLOW has also employed this combination. **Morphia* alone, or in combination with atropia, has been found, when injected hypodermically, not only to relieve quickly the paroxysms in violent cases, but to afford permanent benefit by diminishing the number, frequency and severity of succeeding attacks, and, therefore, to dispute with the bromide of potassium for the foremost position among the remedies against epilepsy. As one may succeed when the other fails, Prof. BARTHOLOW points out that bromide of potassium is most effective in cases of *grand mal*, in which the paroxysms occur frequently, with great violence, and during the day-time, and less effective in those which occur chiefly at night; while the hypodermic injection of morphia is preferable in epilepsy, the paroxysms of which occur at night, in the *petit mal*, and in convulsive tic, but not proper, as a general rule, in cases of epileptoid character dependent upon cerebral lesion. Prof. B. advises, when the paroxysms succeed each other rapidly, and are violent, that the injection be made during an attack, and without loss of time, but states that ordinarily two or three times a week will suffice (dose gr. $\frac{1}{2}$), the onset of an expected attack being anticipated whenever practicable.

HEADACHE.

PROF. HARVEY L. BYRD, M. D., BALTIMORE.

In the treatment of *sick headache*, Prof. BYRD recommends the use of an emetic of ipecacuanha, and after its action the use of the following :

51. R. Chlorali, ℥i
 Aquæ, f. ʒij. M.
 A tablespoonful every hour until sleep is induced.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

In *congestive headache* the use of saline cathartics is of service. Also, a mustard foot bath every night. The application of a *hot salt bag* to the back of the neck often affords relief. This form of headache is frequently associated with cardiac enlargement.

PROF. AUSTIN FLINT, M. D., NEW YORK.

Periodical headaches, as regards successful treatment, belong among the opprobria of medical art. If patients be not unpleasantly affected by opiates, an attack may sometimes be warded off, or its severity much lessened, by a full dose of opium or one of its alkaloids. The carbonate of ammonium and a saline purgative are sometimes effective at the commencement of an attack. Various palliative measures may be resorted to, such as *inhalation of chloroform, evaporating lotions to the head* (alcohol, spirits, vinegar, ether), etc. In some cases a towel or napkin, wrung out in water as hot as can be borne, and wound around the head, is more efficient than cold applications. *Warm stimulating pediluvia*, strong *coffee* or *tea*, and the application of the *galvanic* or the *electro-galvanic current*, are useful in some cases. During the intervals the remedies which are sometimes of service by way of prophylaxis are, *nux vomica* or *strychnia* in small doses, *arsenic*, small doses of *quinia*, *belladonna*, and the preparations of *zinc*, more especially the *valerianate*. They may be tried in succession. Hygienic measures are important, and the avoidance of everything which experience shows, in individual cases, to act as exciting causes.

NERVOUS HEADACHE.

PROF. R. J. GRAVES, M. D., DUBLIN.

52. R. Olei terebenthinæ, f. ʒj-ij.
 For one dose, to be given in cold water.

Our author places much reliance on this medicine in the hysterical and nervous headaches of young women. Some will bear and derive benefit from two or three of these doses in the day, experiencing from its use a diminution of headache, the removal of flatulence, together with a moderate action on the bowels and kidneys. The turpentine may also be given in the form of an enema. Occasionally it causes dysuria and cannot be persevered in.

Dry Cupping at the nape of the neck, between the shoulders, and below the clavicles, is often of great service in hysterical headaches. Six cups should be applied and allowed to remain on for ten or fifteen minutes.

PROF. WILLIAM A. HAMMOND, M. D., NEW YORK.

53. R. Zinci oxidi, ℥ij-v
 Confectionis rosæ, q. s. M.
 Divide into 20 pills. One to be taken three times a day, after meals.

This formula is of great value. The minimum dose (gr.ij) should be commenced with, gradually increasing to the maximum (gr.v) if necessary.

54. R. Extracti nucis vomicæ, gr.v
 Ferri redacti, ℥j
 Quiniæ sulphatis, gr.x
 Syrupi, q. s. M.
 Divide into 20 pills. One to be taken three times a day, after meals.

Nux vomica is preferable to *strychnia*.

55. R. Bismuthi subcarbonatis, ℥ij
 Confectionis rosæ, q. s. M.
 Divide into twenty pills. One after each meal.

These pills will often take the place of those of oxide of zinc (F. 53). They are particularly useful when there is gastric disturbance.

Bromide of potassium is serviceable when the nervous system has been irritated; when exhausted it does harm.

Bromide of ammonium is similar to the bromide of potassium in its action, but the dose need not be so large. Our author often uses both combined.

Opium and its preparations are rarely of value in this disorder. If used, the hypodermic method is the best.

Narcein has, Dr. HAMMOND still thinks, a decided hypnotic effect when given in large doses.

Phosphorus is beneficial in all the forms of nervous headache. It is, however, difficult of administration, and leaves an unpleasant odor about the person. The best results are obtained from the following method of administration :—

56. R. Acidi phosphorici diluti, f.ʒvj
Syrup̄i phosphatum compositi, f.ʒiij.
A dessertspoonful, in water, three times a day.

Arsenic as a nerve tonic stands next in value to zinc. Granules of arsenious acid (gr. $\frac{1}{16}$) are preferable to FOWLER's solution.

Galvanism is highly praised by some and severely condemned by others, in this affection. The brain cannot be acted upon to any considerable extent by the induced current or by reflex action. Our author advises always the *constant current*; being careful to avoid too great intensity, lest amaurosis be produced (*Half-yearly Compendium of Medical Science*, July, 1868).

GEORGE KENNION, M. D., HARROWGATE, ENG.

57. R. Carbonis bisulphidi, f.ʒij.
As a local application in neuralgic, periodical and hysterical headache, and even in many cases of dyspeptic cephalalgia.

About two drachms of the bisulphide of carbon is poured upon cotton wool, with which a small glass-stoppered bottle is half filled. The mouth of the bottle is applied *closely* to the temple or behind the ear, or as near as possible to the seat of pain, and so held from three to five or six minutes. In a minute or two a sensation as of several leeches biting the part is felt, and in three or four minutes more the smarting and pain become rather severe, but subside almost immediately after the removal of the bottle. (*Medical Times and Gazette*, July, 1868). It is very seldom any redness of the skin is produced. The effect of the application is generally immediate; it may be repeated, if necessary, three or four times a day. The sedative vapor of the bisulphide is probably absorbed through the skin, and acts upon the superficial nerves of the part to which it is applied.

DR. LETENNEUR, FRANCE.

58. R. Potassii bromidi, ʒi
Aquæ destillatæ, f.ʒx. M.

A tablespoonful before the mid-day meal, and two tablespoonfuls at bedtime, in migraine with periodical returns. During the attack the patient will take, three or four times a day, small doses of morphia.

DR. LABORDE, FRANCE.

59. R. Quinise sulphatis, ℥ss
 Tincturæ aconiti radialis, ℥℥xv
 Althæe pulveris, q. s.
 Divide into 30 pills. Three or four a day in hemiorania.

JAMES PERRIGO, M. D., MONTREAL.

Our author reports (*Canada Medical Record*, March, 1874) a case of severe headache in a business man, which resisted all ordinary treatment, but which yielded promptly to *guarana*. Thirty grains of the powder in water were prescribed, to be taken when the pain was severe. The medicine acted exceedingly well, completely relieving him of all his headache. He can invariably prevent an attack by taking the above dose when he feels the premonitory symptoms coming on.

THOMAS HAWKES TANNER, M. D., LONDON.

60. R. Quinise sulphatis, gr.xxiv
 Pulveris rhei, gr.xxv
 Glycerinæ, q. s. M.
 Divide into 12 pills, and order one to be taken at night.

Often of service in curing *bilious headaches*; the patients also taking daily exercise in the open air, and avoiding too much sleep.

61. R. Acidi nitro-muriatici diluti, f.℥ij
 Strychniæ, gr.4-4
 Spiritus chloroformi, f.℥vj
 Tincturæ singiberis, f.℥ij
 Aquam, ad. f.℥ij. M.
 A teaspoonful in water three times a day, in *nervous headache*.

Holding the arms high above the head produces a marked effect upon the cerebral circulation, and will frequently relieve the severity of that peculiar morning headache with which some persons constantly awake.

Compression of the temporal arteries with a couple of pads and a bandage may sometimes be of service.

Cold lotions, eau de cologne, etc., to the head, dry cupping or blisters, or setons to the nape of the neck; the removal of decayed teeth or stumps from the mouth, and change of air, are occasionally indicated.

62. R. Zinci valerianatis, gr.xij-xxiv
 Extracti belladonnæ, gr.ij-vj
 Extracti gentianæ, gr.xxiv. M.
 Divide into 12 pills. One to be taken three times a day.

WATERBURY

Useful in *hysterical headache*, especially when there is habitual constipation.

63. R. Zinci phosphatis, ʒj-ij
 Acidi phosphorici diluti, f.ʒiiss
 Tincturæ cinchonæ, f.ʒvj
 Aquæ menthæ piperitæ, ad. f.ʒiij. M.

Tablespoonful in a half wine glass of water three times a day, in *hysterical headache associated with debility*.

HENRY G. WRIGHT, M. D., LONDON.

64. R. Tincturæ capsici, f.ʒij
 Liquoris ammoniæ acetatis,
 Tincturæ aurantii,
 Syrupi aurantii corticis, aa f.ʒvj
 Aquæ, f.ʒss. M.

A teaspoonful, to relieve the headache that ensues after *inebriety*, etc.

65. R. Linimenti chloroformi,
 Linimenti belladonnæ, aa f.ʒiiss
 Tincturæ opii, f.ʒj. M.

For external application, in *rheumatic headaches*.

Mustard plasters applied to the neck are also exceedingly useful as a means of counter-irritation. In such cases (rheumatic headache) the following aperient is of advantage, viz:—

66. R. Pilulæ colocynthidis compositæ, gr.xv
 Extracti colchici acetici, gr.iiij
 Olei carui, m.j. M.

Divide into 4 pills. Two to be taken at bedtime, and one on consecutive nights. These pills should be followed, in persons of a costive habit, by a morning purgative, as follows:—

67. R. Magnesiæ, ʒiv
 Liquoris potassæ, m.xlv
 Extracti sennæ fluidi, f.ʒij
 Syrupi zingiberis,
 Tincturæ aurantii, aa f.ʒss
 Aquæ, f.ʒj. M.

Dose—a tablespoonful.

The administration of an alkaline medicine containing potash, if continued with regularity, will generally be followed by rapid amelioration of the pain and tenderness. The following may be used:—

68. R. Potassii carbonatis, ʒiv
 Potassii chloratis, ʒiiss
 Tincturæ cinnamomi,
 Tincturæ aurantii, aa f.ʒvj
 Syrupi aurantii corticis, f.ʒiiss. M.

A dessertspoonful to be taken twice or three times a day.

If imprudent exposure to cold has produced an aggravation of the headache, and particularly if the patient be subject to catarrh, it is advisable to administer a sudorific at bedtime, such as

69. R. Pulveris ipecacuanhæ compositi, gr.xij
 Pulveris camphoræ,
 Pulveris guaiaci, aa gr.iv. M.
 For one powder, to be taken about bedtime.

In *gouty* headaches colchicum may be employed with greater freedom than in ordinary gout, care being taken that the bowels are freely open during its administration. An actual attack is best relieved by a brisk aperient (F. 66), followed by an effervescing mixture, containing an excess of potash, viz. :—

70. R. Potassii carbonatis, Div.
 Ammonii carbonatis, ʒij
 Tincturæ serpentariæ, f.ʒss
 Aquæ camphoræ, f.ʒiijss. M.
 Two tablespoonfuls to be added to a tablespoonful each of water and lemon juice, and to be taken effervescing twice or three times a day.

In the treatment of *plethoric headaches* the employment of medicines should, as far as possible, be dispensed with. They should only be resorted to when the necessities of business prevent, or the solicitations of indolence interfere with, a strict control over the diet and regimen. In these cases a saline diuretic should be ordered, such as

71. R. Potassii acetatis, ʒij
 Potassii nitratis, ʒj
 Spiritus juniperi compositi, f.ʒxj
 Aquam menthæ piperitæ, ad. f.ʒiv. M.
 A teaspoonful twice a day, together with an occasional aperient at night, viz. :—

72. R. Pilulæ colocynthidis compositæ, gr.l
 Saponis castilliensis, gr.ix
 Olei anethi, mʒj. M.
 Divide into 12 pills; two to be taken at bedtime, and followed by a Seidlitz powder in the morning.

Persons subject to plethoric headaches should not partake of animal food more than once a day; should never indulge the appetite to satiety; should avoid beer, spirits, coffee, and all stimulating beverages; should bathe the head freely at night and lie with it elevated on a hard pillow during sleep; should have an airy bed-

room and rise so soon as fairly awake, for otherwise activity of the thoughts in a recumbent position will congest the head and cause it to ache.

When the patient has been exposed to cold and the headache comes on at night, with the head hot and the skin harsh and dry, the following sudorific, taken at bedtime, is often of great service, the body being kept warm during its action :—

73. R. Antimonii et potassii tartratis, gr. ʒ
 Pulveris Jacobi veri, gr. v
 Pulveris potassii nitratis, gr. x. M.
 To be taken at night.

In the plethoric headache of pregnancy, relief is afforded by the use of saline medicines, as

74. R. Magnesii sulphatis, aa 3j
 Sodii sulphatis, f. ʒij
 Acidi sulphurici diluti, f. ʒiiss
 Tincturæ cardamomi compositæ, f. ʒss
 Syrupi aurantii corticis, f. ʒss
 Aquæ cinnamomi, f. ʒj. M.
 A dessertspoonful twice a day.

Fluids should be avoided as far as possible. Sea air and sponging the body with tepid salt water generally prove beneficial.

In the treatment of *congestive headaches*, the aperients so frequently required should be cordial and saline, such as

75. R. Extracti sennæ fluidi, f. ʒiiss
 Magnesii sulphatis, ʒij
 Acidi sulphurici aromatici, f. ʒij
 Syrupi aurantii corticis, f. ʒj
 Infusi rhei, f. ʒiiss. M.
 Dose—a tablespoonful in the morning.

There are no medicines so invariably useful in cases of congestive headache, attended with debility, as the preparations of Iron. If the patient be of stout phlegmatic habit, the tonic may be combined with a cordial and saline, according to the following formula :—

76. R. Ferri sulphatis, gr. xxxij
 Magnesii sulphatis, ʒx
 Acidi sulphurici diluti, f. ʒij
 Tincturæ cardamomi compositæ, f. ʒij
 Syrupi, aa f. ʒj. M.
 Aquæ pimentæ, aa f. ʒj.
 A dessertspoonful in water twice a day.

77. R. Tincturæ ferri chloridi, f.ʒij
 Acidi muriatici diluti, f.ʒss
 Tincturæ cinnamomi, f.ʒss
 Syrupi,
 Aquæ cinnamomi, aa f.ʒvj. M.
 A dessertspoonful in water, twice a day, about an hour after food.

In the congestive headache of females past the middle period of life, especially when these headaches accompany alterations of the whole system, at the great climacteric period.

In the treatment of *dyspeptic headaches*, when the pain comes on directly after a meal, and when it can be traced to indigestible articles of food, and the patient is tolerably strong, an emetic is useful.

78. R. Pulveris ipecacuanhæ, gr.xxv
 Ammonii carbonatis, gr.v
 Aquæ menthæ viridis, f.ʒiss. M.
 Take at one dose and follow by some warm fluid.

Where the pain ensues some hours after taking food, a warm draught, with the following formula, is generally beneficial :—

79. R. Pulveris rhei, ℥ijss
 Magnesii carbonatis, ℥ij
 Spiritus ammoniæ aromatici, f.ʒij
 Syrupi singiberis, f.ʒss
 Aquam menthæ piperitæ, ad. f.ʒij. M.
 A tablespoonful in water.

Such a headache may often be warded off by the following :—

80. R. Pulveris rhei, gr.xviiij
 Pulveris capsici, gr.v
 Sodii carbonatis exsiccatae,
 Pulveris aloes,
 Saponis castilliensis, aa gr.xij. M.
 Divide into 12 pills. One to be taken before the meal, as a dinner pill.

81. R. Pilulæ hydrargyri,
 Pilulæ rhei composita, aa gr.iv
 Extracti hyoscyami, gr.ij. M.
 Divide into 2 pills. To be taken at night, in cases of headache depending upon *dyspepsia*,

Or,

82. R. Pulveris ipecacuanhæ, gr.j
 Pilulæ colocynthidis composita, gr.vij
 Extracti gentianæ, gr.ij
 Olei carui, m℥i. M.
 Divide into 2 pills. To be taken at bedtime.

When the system is debilitated it is often more advisable to employ the following, in place of the night pills :—

83. R. Infusi sennæ,
 Infusi rhei, ss f.ʒv
 Tincturæ cardamomi composita, f.ʒj
 Syrupi, f.ʒss. M.

To be given as a draught in the morning.

Great benefit is generally derived from the combination of a bitter with an alkali, as in

84. R. Sodii carbonatis, ʒij
 Spiritus ammoniæ aromatici, f.ʒvj
 Tincturæ aurantii,
 Syrupi aurantii corticis, ss f.ʒiiij
 Tincturæ gentianæ composita, f.ʒss. M.

A dessertspoonful twice a day.

If the stomach be very irritable, with excessive flatulence, the following mixture is more suitable :

85. R. Bismuthi subnitratæ,
 Sacchari,
 Pulveris acaciæ, ss ʒj
 Tincturæ cardamomi composita, ss f.ʒss
 Tincturæ zingiberis, f.ʒiiijss. M.
 Aquæ anethi,

A tablespoonful taken twice a day.

The same medicine may be combined with soda and capsicum, thus :—

86. R. Bismuthi subnitratæ,
 Sodii carbonatis exsiccata, ss ʒijss
 Pulveris capsici, gr.vij. M.

For 8 powders. One to be taken twice a day, in dyspepsia with much acidity, with loss of appetite and general want of tone.

87. R. Argenti oxidi, gr.xij
 Pulveris capsici, gr.iv
 Extracti gentianæ, gr.xxiv. M.

Divide into 8 pills. One to be taken twice a day.

In atonic dyspepsia, when the tongue is pale at the tips and edges, and the system weakly, few recipes prove so invariably successful as the above.

88. R. Morphine muriatis, gr.j
 Pulveris camphoræ, gr.xxiv
 Mucilaginis acaciæ, q. s. M.

Divide into 6 pills.

In Intermittent Headache. One pill to be taken when the headache is very intense. Five hours are to be allowed to elapse before repeating the dose.

89. R. Quinæ sulphatis, 3ss
 Ferri carbonatis saccharatæ, ʒj
 Pulveris aromatici, ʒijss. M.

Divide into 20 powders. One to be taken twice or three times a day, commencing with half a powder. Useful in *periodical headache* occurring in delicate and weakly persons.

In the treatment of *Nervous Headache* and of cases of megrims, the combinations of hyoscyamus with camphor, with chloroform, or with a diffusible stimulant, generally affords great relief. The following formulæ may be used :

90. R. Extracti hyoscyami, aa ʒijss. M.
 Pulveris camphoræ, aa

Divide into 20 pills. Two to be taken when the pain is severe.

91. R. Chloroformi, f.ʒiss
 Tincturæ hyoscyami, f.ʒss
 Tincturæ cardamomi compositæ, aa f.ʒss
 Olei limonii, mxxvj
 Sacchari, aa
 Pulveris acaciæ, aa ʒss
 Aquæ camphoræ, f.ʒijj. M.

Dose—a tablespoonful.

92. R. Tincturæ hyoscyami, aa f.ʒss
 Spiritus ammoniæ aromatici, aa f.ʒj
 Syrupi aurantii corticis, f.ʒj
 Aquæ menthæ piperitæ, f.ʒijj. M.

Dose—a tablespoonful.

93. R. Pulveris camphoræ, aa gr.x
 Quinæ sulphatis, aa gr.xij
 Extracti aloës, ʒss
 Extracti hyoscyami, q. s. M
 Mucilaginis acaciæ, q. s.

Divide into 18 pills. Two pills to be taken twice a day, in cases of nervous headache when there is great debility and sluggishness of the system.

(For additional recipes, see Hemicrania).

RÉSUMÉ OF REMEDIES.

BILIOUS, OR SICK, AND DYSPEPTIC HEADACHES.

Ammonii Acetatis Liquor is recommended by Prof. STILLÉ, who considers few remedies so successful in sick headaches, as a teaspoonful or two of this solution.

Ammonii Carbonas will sometimes offer almost instantaneous relief.

* *Ammonii Chloridum* is useful in bilious, as well as hysterical headaches. According to Dr. ANSTIE, gr.x-xx, if given early enough, seldom fails to cut short and greatly mitigate the attack. It is given with great benefit when the pain is most intense in any form of headache.

Argenti Nitras is recommended by Dr. J. JOHNSON (in combination with minute doses of compound colocynth pills), in the habitual stomach headache to which delicate and literary men are so subject.

Bismuthi Subnitras is frequently advised, variously combined, in dyspeptic headache, by Dr. WRIGHT (F. 85, 86).

Carbonis Bisulphidum is recommended by Dr. KENNION, in dyspeptic headache, applied locally (F. 57).

Chloral is recommended in sick headache, by Prof. BYRD (F. 51).

Hydrargyri Chloridum Mite is of service in headaches arising from biliary derangement, or a torpid state of the bowels. It should be followed, at a short interval, by a saline or other purgative.

Magnesia, in cases accompanied with constipation, affords great relief.

Magnesii Citratis Liquor. A dose of the effervescent citrate is often very effectual in dyspeptic headache.

Podophyllum is prescribed with benefit in many forms of bilious headache.

Potassii Bromidum has been recommended for the prompt and certain relief of the paroxysm.

Rheum is advised by Drs. TANNER (F. 60) and WRIGHT, variously combined (F. 75, 79, 80, 81, 83).

CONGESTIVE OR PLETHORIC HEADACHE.

Asarum Europæum, gr.ij-iiij of the powdered root, snuffed into the nostrils, has proved useful in cases of severe chronic headache originating in inflammation of the frontal sinuses.

Aloetic purgatives are beneficial in congestive headaches.

* *Leeches* may be applied with advantage to the temples, to the crown of the head, or to the verge of the anus.

Saline aperients are recommended by Drs. DaCosta (p. 47) and WRIGHT (p. 53).

Shower Baths are of advantage in congestive as well as hysterical headaches.

Sinapisms, to which have been added powdered capsicum or oil of turpentine, are often applied with benefit to the soles of the feet and the inner parts of the calves and thighs.

* *Water*, locally applied, *hot*, is often more effectual than the cold lotions usually employed. Diligently steeping the temples, forehead, occiput, and nape of the neck with water, as hot as can be borne, in many cases will be found a useful remedy. The hot foot-bath is often of signal service.

GOUTY HEADACHE.

Colchicum may be employed with greater freedom in gouty headache than in ordinary gout, according to Dr. WRIGHT (p. 52).

HYSTERICAL AND NERVOUS HEADACHES.

Ammonii Chloridum is advised by Dr. ANSTIE, to be administered in the same manner as for bilious headache (which see above).

Ammonii Bromidum is recommended by Prof. HAMMOND, alone or combined with the bromide of potassium (p. 48).

Argenti Nitras is highly prized by Dr. GRAVES, administered in considerable doses; i. e., gr. $\frac{1}{2}$ five or even six times daily, for five or six days at a time, when the paroxysm has abated. If there be constipation, the nitrate should be combined with minute doses of compound colocynth pill.

Bismuthi Subcarbonas is often prescribed by Prof. HAMMOND, particularly when there is gastric disturbance (F. 55).

Cajuputi Oleum is used both externally and internally, in nervous, rheumatic, and neuralgic headaches.

Camphora is useful, combined with *hyoscyamus* (F. 90, 91, 93).

* *Chloroformi Spiritus*, in the dose ℥xv-xxx, often affords prompt relief in nervous and hysterical headaches.

Cimicifuga is useful in the headaches attendant on uterine derangement.

Caffea. A cup of strong coffee is of service in many cases of hysterical and nervous headache. The addition of the juice of a lemon adds greatly to its efficacy.

Guarana is particularly efficacious in the relief of sick headache, in doses of half a drachm to a drachm (see p. 50).

Hyoscyamus is strongly recommended by Dr. WRIGHT, in nervous headache. It may be combined with camphor, with chloroform, or with a diffusible stimulant (F. 90, 91, 92, 93).

Lavandula. The compound tincture, administered according to the following formula, makes an agreeable stimulant:—

94. R. Tincturæ lavandulæ compositæ,
Spiritus chloroformi,
Spiritus ætheris compositi, ℥℥ f.ʒj
Aquæ camphoræ, f.ʒiij. M.

Dose, two tablespoonfuls in water. Opium may be added if indicated. This is a very effectual recipe for the headache of hysteria.

Narcein is recommended as a hypnotic by Prof. HAMMOND (p. 48).

Nitro-muriaticum Acidum is recommended by Dr. TANNER (F. 61).

Opium is, Prof. HAMMOND states, of little value in these disorders.

Phosphorus is recommended by Prof. HAMMOND in all forms of nervous headache (F. 56).

Quiniaz Sulphas is beneficial in hysterical headaches associated with anæmia.

Rosmarinus. The infusion is a mild stimulant, sometimes of service.

Stramonium has been prescribed with benefit by Dr. COPLAND.

Strychnia. Prof. HAMMOND considers *nux vomica* as preferable to *strychnia* in nervous headaches (F. 54).

Terebinthinæ Oleum is recommended by Dr. GRAVES in hysterical headache (F. 52).

* *Valeriana* is of especial benefit in hysterical headache. Dr. ASHWELL recommends the following formula:—

95. R. Tincturæ valerianæ,
Spiritus ætheris compositi,
Spiritus lavandulæ compositi, ℥℥ ℥.xxx
Tincturæ hyoscyami, ℥.xx
Aquæ camphoræ, f.ʒx. M.

For one dose.

Dr. CONNOLLY recommends the following:—

96. R. Tincturæ valerianæ ammoniatæ
Spiritus ætheris compositi, ℥℥ ℥.xxx
Aquæ camphoræ, f.ʒiss. M.

Or,

97. R. Tincturæ valerianæ ammoniatæ, f.ʒj
Acidi sulphurici diluti, ℥.xv
Aquæ camphoræ, f.ʒiss. M.

Make a draught, to be given twice or thrice a day.

Zinci Oxidum is regarded as of great value in nervous headache, by Prof. HAMMOND (F. 53).

Zinci Phosphas is recommended by Dr. TANNER, in hysterical headache, associated with debility (F. 63).

Zinci Valerianas is also recommended by Dr. TANNER, combined with belladonna (F. 62).

EXTERNAL REMEDIES

Æther to the forehead, on a very thin compress, to avoid irritation of the skin, by thus favoring its free evaporation, is an excellent application.

Camphora, locally applied, is a valuable remedy in nervous headaches. The following formula may be employed:—

98. R.	<i>Camphoræ,</i>	℥j	
	<i>Aceti</i>	℥j	
	<i>Aquæ,</i>	℥j-ij.	M.

Another excellent local application is what is known in France as "l'Eau Sedative de Raspail," which is made as follows:—

99. R.	<i>Aquæ ammoniæ,</i>	100 parts.	
	<i>Camphoræ,</i>	2 "	
	<i>Sodii chloridi,</i>	20 "	
	<i>Aquæ,</i>	900 "	
	<i>Olei rosæ,</i>	q. s.	M.

Dry Cupping is recommended by Dr. GRAVES (p. 48).

Oleum Cajuputi. A few drops rubbed upon the painful part are often effectual.

Shower Baths are often of great advantage in hysterical headache.

NEURALGIC HEADACHE.

Ammonii Chloridum, given when the pain is most intense, in the dose of gr. x-xx, sometimes affords prompt relief.

Cajuputi Oleum is used, both externally and internally, by Dr. COPLAND and others.

Camphora, in the form of "Raspail's sedative water" (F.99), is sometimes very useful.

Carbonis Bisulphidum is recommended by Dr. KENNION (F. 57).

Caffein. The citrate has been recommended in doses of gr.j, every hour, for some time before the expected attack. Coffee is much used by Belgian physicians. The juice of a lemon makes a valuable addition to a cup of strong coffee in these cases. Caffein may also be employed hypodermically.

Nitrite of Amyl, by inhalation, has been successfully employed in neuralgic headache, associated with a diminished supply of blood in the brain.

EXTERNAL REMEDIES.

Acetum. A compress wet with vinegar and water, and bound upon the temples, often affords relief.

Æther applied to the forehead, on a very thin compress, so as to permit of its rapid and complete evaporation, is useful.

Sinapisms over the seat of pain sometimes afford relief.

Spiritus Ætheris Nitrosi makes a pleasant, cooling, evaporating lotion, if not continued so long as to irritate the skin.

PERIODIC HEADACHE.

Arsenici Iodidum has been found, by Dr. WALSH, to give relief in the most violent cases of periodic headache. It should be given in doses of $\text{gr. } \frac{1}{8} - \frac{1}{4}$, twice a day, two hours after eating, and continued for a month or two.

Ammonii Carbonas and a saline purgative, at the commencement of an attack, are recommended by Prof. FLINT (p. 47).

Belladonna is sometimes of service as a prophylactic (p. 47).

Nectandra is a useful remedy in periodical headaches.

Potassii Bromidum often rapidly relieves headache of a paroxysmal character, with heat of the head and flushing of the face.

Quiniæ Sulphas, in small doses, is recommended, by way of prophylaxis, by Prof. FLINT (p. 47).

Zincum. The various preparations of this metal, more especially the valerianate, may be employed with advantage in the intervals of the attacks.

RHEUMATIC HEADACHE.

Aconitum in small doses, either alone or in combination with other remedies, is often of service.

Chloroform liniment is recommended by Dr. WRIGHT (F. 65).

Colchicum, combined with an aperient, is useful (F. 66).

Potassii Carbonas is prescribed by Dr. WRIGHT (F. 68).

Stramonium is recommended by Dr. COPLAND and others.

**Sulphur* internally is often of great benefit in rheumatic headaches and those which occur in women about the period of the cessation of the menses.

Alkaline treatment, if continued with regularity, will generally be followed by satisfactory results (F. 68).

SEVERE IDIOPATHIC HEADACHE.

Ferri Carbonas has been prescribed with signal success, in the dose of gr. j twice a day.

Potassii Bromidum often proves a valuable remedy.

Zingiber. A ginger plaster applied to the forehead is said, by PEREIRA, to afford much relief.

Frigus. A freezing mixture of ice and salt is serviceable in those cases in which the headache is combined with much heat of the integuments, and when the symptoms appear to threaten secondary local inflammation.

Issues. Obstinate headache occurring in robust subjects often yields to an issue at the nape of the neck.

HEADACHE FROM MENSTRUAL DERANGEMENT.

Aloetic Purgatives are useful in cases arising from suppression of the catamenia.

Ammonii Chloridum is variously estimated by different physicians in cases of headache arising from irregularity or suspension of menstruation, some finding it powerless, others of great service.

Cimicifuga is often useful.

**Sulphur* given internally is of benefit in headaches occurring in women about the period of the cessation of the menses.

HEMICRANIA.

M. BERTRAND, PARIS.

100. R. Veratriæ, gr.v
Morphiæ, gr.iiij
Adipis, ʒj. M.

The painful parts to be rubbed with this ointment frequently, when the paroxysms of pain are at their height. Two or three frictions ordinarily suffice. A number of cases of facial neuralgia, and of neuralgic headache, in which quinine and blisters had been tried without effect, yielded promptly to this application.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

101. R. Extracti conii fluidi, m℥
Ammonii chloridi, ʒij
Syrupi aurantii corticis, ℥ss
Aquæ, f. ʒiiss. M.

Teaspoonful thrice daily, in neuralgic headache associated with plethora, rather than anemia, in young women. Also, a drachm of cream of tartar, before breakfast, daily, or twice a day.

A small cup of strong coffee, with which the juice of a lemon has been mixed, will, in some cases, afford relief in an attack of hemicrania.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

102. R. Caffeini citratis, gr.x
Syrupi, q.s.
Divide into 10 pills. One to be given every hour, on the first symptoms.

An infusion of unroasted coffee, drank daily, appears sometimes to render the attacks more rare and less severe.

RÉSUMÉ OF REMEDIES.

**Acidum Arseniosum* is highly praised by Sir THOMAS WATSON, who states that four to six drops of Fowler's solution, three times a day, with due attention to the bowels, will, in nine cases out of ten, remove hemicrania.

Caffein, in the doses of one grain every hour, for some time before the expected paroxysm, is of great service (F. 102).

Cannabis Indica is sometimes very effective.

Conium is used in some cases, combined with chloride of ammonium (F. 101).

Digitalis has proved successful in conjunction with quinine.

Ergota has been employed with very satisfactory results by Dr. E. WAAKES (*British Medical Journal*, Aug. 8, 1868).

Ferri Sulphas, in doses of gr. viij-x, daily, either alone or combined with extract of hyoscyamus, will occasionally cure intermittent hemicrania.

Quinia Sulphas is a most valuable remedy in intermittent hemicrania.

Veratria is highly praised by a number of writers. M. BERTRAND's recipe (F. 100) may be employed, or the following formula by Dr. FULLER:

103. R. Veratriæ, gr.xx-xxx
Glycerinæ, f. ʒij
Spiritus rectificati, f. ʒvj. M.

Apply with a camel-hair brush night and morning, and rub in well along the course of the affected part, care being taken that there is no abrasion of the cuticle.

HYPOCHONDRIASIS.

W. W. GULL, M. D., LONDON.

It is obvious that the first duty of the physician is to encourage the hypochondriac to forget his woes, a difficult thing in practice, as it is a fallacy to suppose that his sufferings are unreal; on the contrary, they are most vividly real, and it is impossible that he should forget them until they cease. The key to the moral treatment is the breaking down of the patient's morbid self-concentration, and this object may be achieved to some extent, in many cases, by a change in the course of his daily life. This may be most readily carried out with those in whom the constitutional tendency to hypochondriasis is aggravated by the ennui of an idle life. For these an active career or occupation which forces them to mix with the world is an immense gain. The isolated activity of the student is no real diversion from the fancies of hypochondriasis, as the case of Dr. JOHNSON and of many other famous intellectual workers abundantly proves. It is needless to say that all actively depressing influences should be removed, such as immoderate venereal indulgence, of whatever kind, or alcoholic intemperance. On the other hand, the influence of new emotions, which tend to lift the patient out of himself, can scarcely fail to benefit. It would be a real good fortune to a hypochondriac if he could fall in love in a natural and healthful manner, or if he could interest himself warmly in philanthropic schemes or other plans of public usefulness. And above all, something like a police supervision should be exercised over his studies, in order that he may be vigorously kept from the perusal of medical or other books which might remind him of his miseries, for though we do not believe that these things can create hypochondriasis, yet they may certainly prevent its cure.

The *constitutional treatment* is to be directed towards improving the general nutrition. The administration of iron is doubtless of great use to some anæmic patients, and *sea-bathing* frequently appears to exercise a very beneficial influence; but the first of these remedies is generally the most efficacious when taken in the form of the chalybeate waters of some foreign spa, and there is good reason to doubt whether both mineral waters and sea-bathing do not owe most of their apparent power to the moral influences of travel, and change of scene, and mode of life. The more specific

nervous tonics, such as strychnia, quinia or phosphorus, seem to exercise but a doubtful and exceptional influence.

While it is desirable to avoid concentrating the patient's attention on parts which are the apparent seat of morbid sensations, it is important to relieve him of the distress caused by real (though mere functional) disorders of the digestive system. Decided acidity of the stomach should be counteracted by the use of antidotes, of which none is more efficacious than *magnesia* in ten grain doses thrice daily, with gentian or cascarilla. The excessive or too prolonged use of alkalis is, of course, to be avoided. The distressing flatulence which is often one of the earliest, and also one of the most annoying symptoms, is greatly relieved by *creasote* (one drop in a pill, two or three times daily) or the *infusion of valerian*. Alcoholic tinctures should be cautiously employed, if at all, for there is real danger of the patient getting to appreciate the comforting sensations given by the spirit so highly that he gradually takes to drink; this is particularly apt to occur in hypochondriacal women, and in patients exhausted by masturbation, or other venereal indulgence. The constipation, frequently so obstinate and troublesome, should be remedied, if possible, without drugs, so as to avoid stimulating the patient's love of self-doctoring in the direction of the habitual use of purgatives. Fruit, green vegetables, etc., and active bodily exercise, are desirable means of accomplishing this object.

Physical exercise should be amusing, and never produce severe fatigue. A short continuance of the malpractice of carrying exercise to the fatigue point will usually suffice to produce a profound deterioration of the vigor of the nervous system, and an aggravation of the hypochondriacal fancies.

DR. HOMOLLE, FRANCE.

104. R.	Extracti aloës,		
	Quiniæ sulphatis,	aa	3ss
	Extracti valerianæ,		q. s.

Divide into 40 pills. One to four a day in hypochondria. Exercise in the open air, amusements and appropriate regimen.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

The only way to cure a hypochondriac, is to rid him of his morbid sensations, but it is useless to dispute with him and try to convince him of the error of his ideas. In the first place, any existing derangement of the system which would cause a feeling of

illness in a sane person, should be corrected. The benefit derived from various *natural mineral springs* is no doubt due to their happy effect upon the gastric disorders which so frequently give rise to this disease. Preparations of *iron, sea bathing, and cold foot-baths*, are frequently appropriate. Drastic *cathartics* must be used with caution, though they cannot be altogether dispensed with, and generally afford temporary relief. Patients should be warned against over-dosing. This also applies to the use of *carminatives*, for which they nearly always beg.

The *psychical* treatment should have in view the diversion of the attention from the sensory to the motor and intellectual spheres. This object will not be attained in educated patients by ordering long walks, wood-sawing, gymnastics, and mechanical pursuits, because the attention is not diverted by such action out of the sphere of sensation. A hypochondriac merchant sawing wood is always busy with the thought that he is doing so because he is sick. General rules are of little value, as the directions must always be in accordance with the capacity, education and means of the patient.

RÉSUMÉ OF REMEDIES.

Asclepitade, in combination with bitter tonics and mild aperients, may often be given with advantage in hypochondriasis attended with dyspepsia. *Crescendum*, one drop, in pill, two or three times daily, will greatly relieve the distressing flatulence of hypochondriasis.

Ad Boreum Purpureum is advised by Dr. COPLAND in hypochondriasis attended with torpor of the intestines:—

165. B. *Fellis bovini purificati*.
Pilule asclepitade composite ʒʒ gr. iiii
Extracti aloë gr. ii
Saponis gr. i
Pulveris ipocassanie compositi gr. viij. M.

For 30 pills. One or two to be taken before dinner.

Ferr. Sulphas is useful when anæmia co-exists.

Synepismus has been found of service by Dr. HARLEY, in occasional full doses (ʒʒi-vij) of the succus.

Mezetas, in the dose of one grain every two hours, often proves successful in the alleviation of hypochondriasis.

Potassi Bicarbonas is an uncertain remedy in this disease, affording great relief in some cases, and proving inert in others.

Stomachica. The infusion is sometimes useful.

Camph. Bala. The rosinous extract of this res in doses of gr. j-ʒ, thrice daily, has proved beneficial in the hands of Russian physicians.

Alb. Jule are often highly useful.

Spiced Jule have been employed with marked advantage.

HYSTERIA.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

The following directions are given by our author as to what may be done during a fit of hysteria: Everything tight about the patient's person should be loosened. The window should be opened and the cold air allowed to blow over her. The horizontal posture on a bed or the floor should be secured. This being done, many modes of further proceeding may be followed. Bleeding is, in all cases, of doubtful efficacy. When the jaw is locked, the following *enema* (recommended by Dr. WOOD) may be used:—

106. R. Assafœtidæ, ʒij
Aquæ, f. Oss. M.

To be beaten up with the yolk of an egg, or, what is still better,

107. R. Olei terebinthinæ, f. ʒss.

To be mixed with the yolk of an egg, and then added to half a pint of water.

Another remedy is to *fill the mouth with salt*. But that which supersedes all others, and is unquestionably the best, is a *good drenching with cold water*. If the patient lie on the bed, the head should be drawn over its side, and a large quantity of water poured on it, from a considerable height, out of a pail, jug, or other large vessel, and directly over the mouth and nose of the patient, so as to stop her breathing and compel her to open her mouth. This practice is generally introduced into hospitals, and until it was adopted, it was not unusual to see three or four patients in hysteria in the same ward and at the same time. Under this practice, however, a hysterical case is rare, and the fit seldom occurs twice in the same person, and never becomes epidemic.

PROF. BOUCHUT, PARIS.

108. R. Chloroformi, ℥.xx
Alcoholis, f. ʒiiss
Syrupi, f. ʒviiij. M.

Mix the chloroform and alcohol, then add the syrup, and shake. To be given by tablespoonfuls to hysterical patients, during the attack.

109. R. Moschii, ʒss
Assafœtidæ, ʒij
Camphoræ, gr. xv
Extracti gentianæ, q. s.

Divide into 15 pills. Three a day in nervous and hysterical affections.

110. R. Zinci valerianatis, gr. ix
 Extracti belladonnæ, gr. ij
 Extracti gentianæ, ℥j.
 Divide into 12 pills. One thrice daily in hysterical headache, associated with habitual constipation.

THOMAS KING CHAMBERS, M. D., LONDON.

111. R. Acidi muriatici diluti, f.℥iss
 Aquæ calefactæ, (95° F.) O. xxx. M.
 For a bath. This tonic warm bath is to be used once a day, in order to prepare the patient for a *shower bath* twice a day.

Shower baths, in hysterical cases, are highly recommended by Dr. C. The making up the mind to the shock of a cold shower bath is a capital exercise of the will. Such baths have also a good influence by arterializing the cutaneous circulation, driving the venous blood home to the heart and lungs.

Our author rings the changes upon the following prescriptions in the treatment of this disease:—

112. R. Pilulæ assafoetidæ, No. xxx.
 Three to be taken thrice daily.
 113. R. Spiritus ammoniæ foetidæ, f.℥ij.
 A teaspoonful in water three times a day.
 114. R. Tincturæ castorei ammoniatæ, ss f.℥ij.
 Aquæ fœniculi,
 A dessertspoonful in water thrice daily.
 115. R. Pilulæ galbani compositæ, No. xxx.
 Two thrice daily.
 116. R. Zinci valerianatis, ℥j
 Syrupi, q. s.
 Divide into 20 pills. One to be taken three times a day.

SIR CHARLES LOCOCK, LONDON.

117. R. Potassii bromidi, ℥ijss
 Aquæ cinnamomi, f.℥iv. M.
 A dessertspoonful thrice daily.

In hysterical epilepsy, with disordered uterine functions, the treatment being prolonged. It was this use of bromide of potassium, suggested by our author, which led to its introduction as a remedy in forms of epilepsy other than the hysterical.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

118. R. Aurii et sodii chloridi, gr. v
 Tragacanthæ, ℥j
 Sacchari, q. s. M.
 Divide into 40 pills. Order at first one of these pills to be taken an hour after dinner, and another an hour after supper. Afterwards order two pills to be taken at these hours, and gradually increase the dose up to eight pills daily.

Our author speaks of this preparation as a nervine of great efficacy in hysteria. He has made use of it with signal effect in many cases where there was no indication for the local treatment of uterine disease, or else, where the hysteric symptoms persisted, although the local uterine affection had been cured.

THOMAS HAWKES TANNER, M. D., LONDON.

119. R. Tincturæ assafœtidæ, f.ʒij
Ammonii carbonatis, ʒi
Aquam camphoræ, ad. f.ʒiv. M.
One or two tablespoonfuls occasionally, when feeling languid or hysterical.
120. R. Tincturæ assafœtidæ, f.ʒij
Spiritus ammoniæ aromatici, f.ʒiij
Tincturæ chiretæ, f.ʒviij.
Sixty drops in a wineglassful of water every two or three hours, until the paroxysms cease.
121. R. Tincturæ valerianæ ammoniatæ, f.ʒijss
Infusi valerianæ, f.ʒiv.
Two tablespoonfuls to be taken occasionally.
122. R. Ferri phosphatis, ʒij
Acidi phosphorici diluti, f.ʒiss
Syrupi aurantii corticis, f.ʒj
Syrupi acaciæ, f.ʒiij.
A tablespoonful, largely diluted, three times a day.
123. R. Phosphori, gr. j.
Olei amygdalæ dulcis, f.ʒiij. M.
One teaspoonful in a wineglassful of barley water three times a day.

The patient's diet should be regulated. She should have nourishing food, and often a moderate quantity of wine or beer. Hot rooms and evening parties are to be proscribed, and stays ought not to be worn. Healthy mental occupation should be afforded.

EDWARD JOHN TILT, M. D., LONDON.

124. R. Tincturæ castorei, f.ʒiij
Spiritus lavendulæ compositi, f.ʒvj
Aquam camphoræ, ad. f.ʒvj. M.
A tablespoonful two or three times a day, when cerebral symptoms and hysterical phenomena are marked.

The therapeutical indications in the treatment of hysteria are:
1st. To blunt the sensitiveness of the nervous system by sedatives and antispasmodics, and to strengthen it by metallic and other tonics, and by hygiene. 2d. To cure all diseases of the sexual organs, and save the nervous system from visceral irritation, by

good hygiene at menstrual periods; or by marriage, when the sexual organs crave for their legitimate satisfaction.

GERMAN PHARMACOPŒIA.

125. R. Tincturæ assafœtidæ, f.ʒiv
 Tincturæ castorei, f.ʒiij
 Tincturæ opii, f.ʒi. M.

From fifteen to thirty drops, by the mouth or in enemata, twice or three times a day, in the hysterical attacks of dysmenorrhœa. Bitter drinks and preparations of iron in the intervals of the attacks if the patient be anæmic.

RÉSUMÉ OF REMEDIES.

Ether. Nothing, according to STILLÉ, so distinctly moderates the paroxysms of this disease as the inhalation of ether. Those who have found the spasms aggravated by a certain degree of etherization have not administered a sufficient quantity of the vapor. If persisted in it would undoubtedly have put an end to the fit.

Allium. The smell of bruised garlic will sometimes promptly terminate a hysterical paroxysm.

Aurii et Sodii Chloridum is prescribed by Dr. NIEMEYER (F. 118).

Aloes. The pill of aloes and assafœtida is very serviceable in the constipation of hysteria.

**Ammonium.* The carbonate, the aromatic spirits, the fœtid spirit, the valerianate, and other preparations, are much used and of great value (F. 113).

Anthemis. A wineglassful of the infusion of chamomile may be given with advantage thrice daily.

**Assafœtida* is a most valuable medicine in this disease. It may be given alone, or combined as directed in (F. 119, 120), or the following form may be used :

126. R. Tincturæ assafœtidæ,
 Tincturæ castorei,
 Tincturæ valerianæ ammoniatæ, aa f.ʒij
 Aquæ camphoræ, f.ʒviij. M.

Dose—one or two tablespoonfuls every hour. Assafœtida may also be given, in the form of an enema (F. 106).

Aurantii Flores. Orange flower water is much used and valued in France. It is an elegant stimulant and antispasmodic, in doses of one to two fluid ounces.

Brominium. See Potassii Bromidum.

Cajuputi Oleum internally is often of benefit.

Camphora is a very serviceable remedy, either alone or in combination with assafœtida or opium.

Cannabis Indica is sometimes useful.

Castoreum is a remedy of considerable value (F. 114, 124, 125).

Chloral may prove of use in calming hysterical excitement.

Chloreform inhalation is highly praised by Dr. BROWN-SÉQUARD and Dr. GRAILY HEWITT in severe and prolonged hysterical paroxysms. Internally it may be given with ammonia or assafœtida. A liniment of chloroform often speedily relieves hysterical pain in the side.

Cupri Sulphas, in small doses, long continued, is recommended by Sir. B. BRODIE, in obstinate hysteria.

Cusparia Cortex. The infusion is an eligible light tonic in hysteria.

Ferrum is indicated in hysteria associated with anæmia. It may be given combined with valerian and other antispasmodics (F. 122).

Galbanum sometimes agrees better than assafoetida, and may produce equally favorable results, particularly in cases associated with disordered uterine functions. A galbanum plaster over the sacrum often affords relief (F. 115).

* *Lavandula* is sometimes an effectual remedy (F. 124).

Lupulin has been recommended in chronic hysteria, attended with morbid vigilance, in doses of ten grains every six hours.

Moschus, in doses of gr. x-xv thrice daily, is a valuable remedy, particularly when the surface is pale and the pulse languid.

Opium is useful in cases in which the paroxysms are brought on by pain.

Phosphorus is prescribed by Dr. TANNER (F. 122, 123).

Potassii Bromidum is sometimes a useful sedative in hysteria. Its use was suggested by Sir C. Locock (F. 117).

Ruta. From two to five drops of the volatile oil, on sugar, is a popular remedy; so also is the infusion of rue.

* *Santonin* sometimes proves useful in revealing the true cause of the hysterical symptoms, viz., worms in the intestinal canal.

* *Spiritus Ætheris Nitrosi* is often very effectual in relieving hysterical spasms. *Terebinthinæ Oleum*, in enema, will often arrest a severe paroxysm when ordinary means fail.

* *Valeriana* is a valuable remedy; it may be given both during the paroxysm and in the intervals (F. 121).

Zinci Oxidum is considered by Dr. WARING CURRAN as more efficacious in hysteria, than the valerianate.

Zinci Sulphas, in the dose of one grain, combined with extract of gentian, in pill, two or three times a day, is a valuable remedy in cases of hysteria depending upon debility. It will be found to agree better with many women, than the preparations of iron, causing less irritation.

Zinci Valerianas is recommended by Dr. CHAMBERS (F. 116).

Shower Baths often prove highly useful.

Turkish Baths are sometimes beneficial.

Cathartics are to be administered if constipation exists, as it is important in hysteria to keep the bowels open. Aloes are indicated if there be torpor of the uterine system; mercurials or podophyllin, if there be biliary derangement; and saline, if there be plethora; but active purgation is in no case advisable.

Dry Cupping at the nape of the neck, between the shoulders, or below the clavicles, during a paroxysm of hysteria, has been found, by Dr. GRAVES, to be attended with the best results.

Electricity. Dr. LAYCOCK advises the persevering and systematic application of electro-galvanism to the abdominal and pelvic regions, in combination with the internal use of tar.

Emetics. An emetic of ipecacuanha given when the paroxysm is impending, often prevents it.

Enemata of assafoetida, turpentine, and other antispasmodics, are often of advantage (F. 106, 107).

Frigus. The sudden application of cold to the surface of the body, in hysterical cases simulating death, will revive the signs of life.

Water Douche over the head and face, strongly recommended by Dr. AITKEN, p. 65.

INSOLATION.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

Our author recommends the following line of treatment of Dr. BARCLAY:—

In the class of cases in which death tends to occur suddenly, from *syncope*, there is little opportunity afforded for relief; but the measures indicated are—the *cold douche*; keeping the surface wet and exposed to a current of air, or assiduously fanned; exclusion of light as far as possible; the immediate employment of stimulants, external and internal, by the rectum as well as by the mouth. *Depletory measures of any kind are not to be thought of.*

In the less rapidly decisive cases, prompt treatment is of the greatest use, while delay is fraught with the greatest danger. The patient must be immediately stripped of his outer clothing, placed in a semi-recumbent position, and the cold douche applied, from a height of three or four feet, over his head and along his spine and chest, while his extremities are sponged with cold water. Relaxation of the pupil is the first favorable symptom under this treatment, which may require to be repeated several times, on account of returning insensibility. If there is any evidence of failure of the pulse, this treatment must be discontinued, for application of cold to the head is then all that can be borne. The hair is to be cut short as soon as possible, and a blister applied to the nape of the neck. When the first violence of the attack is subdued, increasing confidence in the ultimate result may be indulged in so soon as vesication takes place; and in cases where insensibility recurs after an interval of ten or twelve hours, it may be removed by the application of a second blister to the vertex. A blister may also be applied along the spine in the worst cases. Stimulation by the *electro-galvanic current*, with the moist sponges applied along the sides of the neck, chest and epigastrium, ought also to be employed. *Sinapisms* ought generally to be applied to the extremities, and to the chest or sides.

In cases where the breathing is much oppressed, and the bronchial tubes loaded with mucus, the patient should be turned occasionally over on his face and side.

In the convulsive form of the disease, where the greatest irritability of the nervous system prevails, the douche is found to be in-

admissible, from the agony which it occasions. In such cases, Dr. BARCLAY has found great benefit from the inhalation of chloroform. Great care is necessary in its employment, and the cases in which it is indicated are rare.

Dr. A. P. MERRILL, of New York, and others, have recommended the use of chloroform internally.

DR. WHITEHILL, OF ST. LOUIS.

Our author has had a large experience with sunstroke, having seen as many as fifty cases in a single day during a forced military march in 1863. (*St. Louis Medical Archives*, September, 1868.)

The treatment found most successful was cold to the head and chest, friction of the extremities, and the internal administration of stimulants, such as brandy and ammonia. In his own case, the nausea and vomiting were relieved by full draughts of strong green tea and Rhenish wine. In all cases, a most important part of the treatment was to place the patient in the recumbent position in the shade, where there was a free circulation of air, and at the same time disencumber him of everything that could in any wise interfere with either circulation or respiration. Under this treatment every case had recovered.

C. G. HILL, M. D., MARYLAND.

Our author recommends (*Virginia Medical Monthly*, November, 1874), oxygen inhalations in heat stroke. The oxygen should be applied loosely to the nostrils, so as to allow a free admixture of atmospheric air.

W. C. MACLEAN, M. D., LONDON.

When blood-letting was the rule for sunstroke recovery was the rare exception. There is now great unanimity of opinion on the treatment, and the lancet has no place in it. At the earliest possible moment, let the sufferer be carried to the nearest shade, stripped and *assiduously dashed with cold water, over the head, neck and chest*. If this be effectually and quickly done, the powerful impression on the cutaneous nerves will soon re-establish respiration, at first by gasps and catches, soon in a more regular and tranquil manner. It will also reduce the heat of skin. It may be required to be done again and again; in hospital it may be necessary to envelope the patient in a *wet sheet* and to ply the fan or punkah over him vigorously, until the skin is reduced to a

more natural temperature. The patient should be encouraged to *drink* freely; if vomiting follows it will often aid in relieving the congestion of the lungs. The *douche*, used as above described, is a powerful remedy, and as Dr. ABERCROMBIE long since pointed out, it may be abused, particularly if it is applied too long to the shaven scalp. MOREHEAD also cautions us against its prolonged use in a routine way when the skin is cold and clammy and the respiration sighing; under such circumstances we must restrict ourselves to dashing water over the face and chest. When the heat of the skin is excessive we may avail ourselves, if ice be at hand, of Dr. PARKES' suggestion, and give an *enema of ice cold water*. We should apply *ammonia*, with the usual caution, now and then, to the nostrils; the bowels being always constipated, the sooner they are relieved the better, by the use of purgatives and enemata. The occurrence of moderate diarrhœa seems to favor recovery. Support and a judicious use of stimulants must not be neglected. If sensibility be not restored and maintained by the *douche*, a *blister* should be applied at once to the nape, and if needs be, to the shaven head. There is much unanimity as to the good effects of this measure. Dr. BARCLAY has found chloroform inhalation useful in a convulsive form of the disease, attended with extreme nervous irritability, a class of cases in which the *douche* is inadmissible, from the agony it occasions. In some cases life was saved by this remedy; in all it was prolonged.

Treatment of the Sequelæ.—Great attention to the function of the skin forms an essential part of the treatment of all the varieties of sequelæ of sunstroke, for it is impaired in all. Frictions, bathing, exercise in the open air, are beneficial. When the headache is not fixed, but shifting, it will often be found to depend on a weak condition of the digestive organs, and careful treatment, suited to the particular features of each individual case, is required.

EDWARD JOHN WARING, M. D., LONDON.

Blood-letting was formerly much employed; but from the mortality which attended this treatment, in the hands of Dr. RUSSELL and others, it has fallen into comparative disuse. Dr. MOREHEAD, indeed, goes so far as to say, that he "should have no hesitation in altogether interdicting this proceeding in the treatment of sunstroke." This is, perhaps, rather too sweeping a direction; but it is certain that, except in young, plethoric constitutions, and where

vascular action runs high, by far the most successful treatment consists in cold affusion to the head, throat, chest, spine, and epigastrium, the application of ice to the spine, stimulants internally (ammonia, ether, weak brandy and water), and frictions to the surface. In the stage of reaction, leeches to the temples, or cupping at the nape of the neck, may be required.

The first thing to be done after removing the patient into the shade, is to dash cold water over the head, neck and chest. If this be effectually and quickly done, the powerful impression on the cutaneous nerves will soon re-establish respiration, at first by gasps and catches, and soon in a more regular and tranquil manner; it will at the same time reduce the heat of the skin. When the patient can swallow, cold water should be freely drank, and Dr. PARKES suggests the use of enemata of ice-cold water. The use of the douche to the head requires some discrimination, especially if the skin be cold and clammy, in which case it must be restricted to the face and chest.

RESUMÉ OF REMEDIES.

Chloroformum, internally, and by inhalation, has been recommended.

Morphia, hypodermically, in the dose of gr. $\frac{1}{4}$, has been given with success by Dr. JAMES H. HUTCHINSON, in cases marked by nervous symptoms, such as convulsions, jactitation, delirium and general excitement.

Oxygen by inhalation has been recommended in heat stroke (p. 71).

Quinia Sulphas is regarded by WALLER (*India Medical Gazette*, July 1869), who has had a large experience in India, as a specific in this affection, whether the skin is hot and dry or cool and moist, and whether or not muscular spasm be present. It rapidly diminishes the stupor and spasm, restores consciousness, and cures the attack. He gives it at every stage of the attack, either by the mouth (gr.xx at first, and gr.x every successive hour), or if the patient be unable to swallow, hypodermically (gr.iss. injected in each arm).

* *Water*, freely drank, cold, is beneficial, as well as its use by free affusions.

Stimulants are useful by the rectum and mouth.

Blood-letting is rarely indicated, and often very dangerous.

EXTERNAL REMEDIES.

Cantharis. A blister to the nape, or to the shaven head, produces excellent results if insensibility continue (p. 72).

Enemata of ice cold water have been advised (p. 72).

Frigus. The application of cold to the general surface of the body, by stripping the patient and steadily rubbing the entire skin with large pieces of ice, keeping, at the same time, pieces in each axilla, is a method of treatment employed at the Pennsylvania Hospital with success (*Pennsylvania Hospital Reports*, 1868, p. 380). Iced wine and water are given internally. Dashing cold water over the head, neck and chest is excellent practice (pp. 70, 71).

INSOMNIA.

PROF. ROBERTS BARTHOLOW, M. D. CINCINNATI, OHIO.

Morphia and atropia may be combined for hypodermic injection, so as to procure sleep, care being taken that there is no excess of atropia, or an amount of atropia sufficient to antagonize the cerebral effects of the morphia. They should be used in the proportion of gr. $\frac{1}{16}$ — $\frac{1}{8}$ of atropia to gr. $\frac{1}{4}$ — $\frac{1}{2}$ of morphia. As the susceptibility to atropia varies immensely, the precise quantity to be employed in any case must be regulated accordingly.

C. E. BROWN-SÉQUARD, M. D., LONDON.

127. R. Potassii bromidi, ℥ss
Aque cinnamomi, ℥iij. M.

A dessertspoonful a quarter of an hour before the last meal, and the same dose, or three teaspoonfuls, repeated at bedtime, for adults.

Excepting when pain is one of the causes preventing sleep (in which case the alkaloids of opium, aconite, or hyoscyamus should be employed), Dr. BROWN-SÉQUARD has found that this remedy has a most wonderful power to produce a quiet and refreshing sleep, without any drawbacks. In some cases it is necessary to increase the dose of the bromide, and to give also a small dose of narceine or codeine an hour before bedtime. In those affections in which the bromide of potassium is not powerful enough as a sleep-inducing agent, a warm bath of four, five, or six hours' duration is often successful.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

128. R. Assafoetidae, gr. x
Extracti hyoscyami, gr. iij-v. M.

For one suppository. To be introduced at night, to quiet restlessness and induce sleep where it is not desirable to give opiates.

(GRAVES mentions that in persons of irritable and nervous disposition he has found musk or assafoetida, given more or less frequently during the day, effectual in procuring sleep at night.)

129. R. Pulveris digitalis, gr. iij
Extracti hyoscyami, aa
Camphoræ, gr. xij. M.

For 12 pills. One to be taken at night.

Prof. DA COSTA has found, in reference to the soporific and anodyne properties of narceine, that it appeared, in doses in which

morphia is prescribed, totally destitute of either; and in larger doses uncertain, and often palpably inert. It does not allay irritation. (Pennsylvania Hospital Reports for 1868.)

PROF. R. J. GRAVES, M. D., DUBLIN.

130. R. Tincturæ calumbæ,
Tincturæ quassiæ,
Tincturæ gentianæ,
Tincturæ cinchonæ, aa f. ʒj
Morphiæ muriatis, gr. j-ij. M.

A teaspoonful thrice daily, in a small cup of tea, an hour before the evening meal, to stop the nausea, quiet the nervous irritability and induce sleep, particularly in the case of those who abuse alcoholic drinks.

131. R. Assafoetidæ, ʒj
Morphiæ sulphatis, gr. ij
Mucilaginis acaciæ, q. s.

Divide into 30 pills. One or two at bedtime, in the insomnia of hypochondria, hysteria, and in general of nervous affections.

132. R. Chlorali, Div
Aquæ destillatæ, f. ʒv
Syrupi, f. ʒ iss. M.

A tablespoonful from hour to hour, until sleep is produced.

PROF. WILLIAM A. HAMMOND, M. D., NEW YORK.

The principles which should prevail in the treatment of wakefulness may be arranged into two classes.

1st. Those which, by their tendency to soothe the nervous system, or to distract the attention, diminish the action of the heart and blood vessels, or correct irregularities in their function, and thus lessen the amount of blood in the brain.

2d. Those which directly, either mechanically or through a specific effect upon the circulatory organs, produce a similar effect.

In slight cases, the measures belonging to the first class often prove effectual. Among them are music, monotonous sounds, gentle frictions of the surface of the body, soft undulatory movements, the repetition by the insomnolent of a series of words till the attention is diverted from the existing emotion which engages it, and many others of similar character. In persistent insomnia, however, these are nugatory.

Chief among the means embraced under the second head are those which tend to improve the general health of the patient.

In regard to food, while it is an error to suppose, as is generally done, that a moderately full meal, eaten shortly before bedtime, is necessarily productive of wakefulness, there is no doubt that this

condition is induced by an excessive quantity of irritating or indigestible food. A hearty supper of plainly cooked and nutritious food rather predisposes to sleep. This is due to the fact that the process of digestion requires an increased amount of blood in the organs which perform it, and consequently the brain receives a less quantity. This hypnotic effect is neutralized, however, when the food is immoderate in amount or irritative in quality, as it then, either by the pressure upon the abdominal vessels or through a reflex action on the heart, augments instead of diminishes the quantity of blood circulating in the brain. Attention should, therefore, be paid to the diet of the insomniac. As a rule people are under-fed. This is especially true of women. The tone of the system is thus lowered, and local congestions of different parts of the body are produced. If the brain be one of these, wakefulness results.

Most of the cases of insomnia in women are of the passive variety, and require not only nutritious food, but *stimulants*. Whisky is generally to be preferred to brandy and many kinds of wine. Nothing can be better, as a good stimulant, and at the same time tonic, than *Tarragona wine*, drank at dinner, to the extent of a glass or two. Next must be ranked good *lager beer*.

There are cases in which *coffee* induces sleep. Our author mentions several in which passive wakefulness was entirely and speedily cured by a cup of strong coffee, taken for three or four nights in succession, at bedtime. In females of languid circulation and a consequent tendency to internal congestions, it is particularly useful.

The employment of stimulants is only of service in the asthenic or passive form of insomnia; in the sthenic or active form they would, of course, increase the difficulty.

Physical exercise in the open air, extended to the point of inducing a slight feeling of fatigue, is productive of good effects.

The *warm bath* calms nervous irritability and determines blood from the head. Putting the feet in water of the temperature of 100° F. will often induce sleep, particularly in children, after other means have failed.

Cold water (32° F.) applied directly to the scalp has a good influence in those cases in which the individual is strong, the heart beating with force and frequency, and the mental excitement great. It is not admissible in the asthenic form of wakefulness.

Among the purely medicinal agents, *bromide of potassium* holds the first rank. It diminishes the amount of blood in the brain, and allays any excitement which may be present in the sthenic form of insomnia. The flushed face, the throbbing of the carotids and temporals, the suffusion of the eyes, the feeling of fullness in the head, all disappear as if by magic under its use. It may be given in doses of from ten to thirty grains; the latter quantity is seldom required, but may be taken with perfect safety in severe cases (see F. 127).

133. R. Zinci oxidi, ℞ij
 Confectionis rosæ, q. s.
 For 20 pills. One thrice daily, the last dose being taken just at bedtime.

Our author seldom employs *opium*; there are cases of insomnia, however, in which its influence is decidedly beneficial.

134. R. Tincturæ hyoscyami, ℥.ʒij.
 From one to two teaspoonfuls in water, at bedtime.

Especially indicated in those cases which are accompanied by great nervous irritability. A good preparation of this drug is difficult to obtain. It possesses no advantage over bromide of potassium, to which it is not equal in any respect.

Our author has nothing to say in commendation of valerian, assafoetida and other antispasmodics. Tonics, especially iron and quinine, are almost always useful, even in the active forms of the affection.

In insomnia dependent upon severe and long-continued mental exertion, all means will fail if the individual will not consent to use his brain in a rational manner. Proper intervals of relaxation must be insisted upon, and in some cases mental rest. Travel is always of the greatest advantage in such cases.

C. HANFIELD JONES, M. B., LONDON.

It is often well, when sleeplessness depends upon hyperæsthesia, to give not only a *stimulant*, but also some *digestible nourishment*, about the time of going to rest, or even in the course of the night, when debility to a serious extent exists. A *mustard poultice* to the epigastrium is also an excellent hypnotic in some cases, probably owing to its stimulating a languid solar plexus. Among the

various soporifics, it is doubtful whether any are more potent, especially for the weakly and hyperæsthetic, than prolonged exposure to the *cold open air*. This should be so managed as not to cause great fatigue, and be followed by a sufficient meal. The effects of a *monotonous voice* in inducing sleep are well known, particularly when the speaker or reader is dictating some matter not without a considerable tinge of dullness. The old monk's prescription for sleeplessness, viz., to tell your beads, was sound advice. *Hyoscyamus* frequently proves itself a really valuable remedy. It is well given in enema, in a dose not exceeding that for the mouth.

ANTOINE RUPPNER, M. D., NEW YORK.

135. R. Tincturæ hyoscyami, gtt. x-xx.
For a single hypodermic injection.
136. R. Tincturæ cannabis, gtt. x-xx.
For one hypodermic injection.

THOMAS HAWKES TANNER, M. D., LONDON.

137. R. Extracti stramonii, gr. ij
Extracti hyoscyami, gr. xvij
Extracti lupulinæ, ʒij. M.
- For 12 pills. One to be taken every four hours until relief is obtained, in chronic disorders attended with suffering; in diseases of the nervous system accompanied with pain and restlessness; and in the dyspnoea of phthisis and emphysema.

Our author has seen good results in cases of wakefulness, particularly when there is any debility, from a tumblerful of port wine negus, or of mulled claret, or of white wine whey, taken the last thing at night. Where the skin is hot and dry a glass of cold water appears to be useful.

When there is any physical cause it must be removed. If the bowels are constipated or the excretion unhealthy, laxatives and alteratives will be required. Patients afflicted with heart-burn should take three or four *bismuth lozenges* before retiring to rest. If sedative drugs are necessary, resort should first be had to *hyoscyamus*, *hops*, *Indian hemp*, or *conium*. When stronger drugs are needed the following may be prescribed:—

138. R. Morphine muriatis, gr. j-ij
Spiritus chloroformi,
Tincturæ cardamomi composita, ss f. ʒj. M.
- Dessertspoonful at bedtime;

Or,

- | | | | |
|------------------------------|---------------------|----------|----|
| 139. R. | Extracti opii, | gr.ijj | |
| | Extracti hyoscyami, | gr.xxiv. | M. |
| For 6 pills. One at bedtime. | | | |

Frequently the exhibition of opiate enemata or suppositories is preferable to the use of this drug by the mouth. The following may be employed :—

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|--------------------|--------------------|---------|----|
| 140. R. | Tincturæ opii, | ℥xx-xxx | |
| | Mucilaginis amyli, | f.ʒij. | M. |
| For one enema. | | | |
| 141. R. | Pulveris opii, | gr.j-ij | |
| | Saponis, | gr.x. | M. |
| For a suppository. | | | |

EDWARD JOHN TILT, M. D., LONDON.

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|--|---------------------------|---------|----|
| 142. R. | Extracti hyoscyami, | gr.xxiv | |
| | Extracti cannabis indicæ, | gr.ijj. | M. |
| For 12 pills. One or two to be taken at night, or oftener. | | | |

But Dr. TILT gives Indian hemp in one-grain doses, as soon as he finds it agrees, and sometimes in larger doses. If he desires a tonic as well as sedative effect, he orders

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|--|---------------------|------------|----|
| 143. R. | Extracti hyoscyami, | | |
| | Quiniæ sulphatis, | ʒʒ gr.xij. | M. |
| For 12 pills. One to be taken every night. | | | |

This is a preparation that he has often found to be well borne by women who could not bear large doses of any tonic; some have continued to take it for months, not leaving it off during the menstrual period; and it will not interfere with the action of any purgative that may be required.

In one case of sleeplessness, one drachm of *lupulin*, in the form of pill, produced sound sleep after opium and hyoscyamus had failed.

CHARLES WEST, M. D., LONDON.

Our author states that the value of *tincture of hyoscyamus* as a sedative in the diseases of children can scarcely be too highly estimated. He orders

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| 144. R. | Tincturæ hyoscyami, | ℥xviij | |
| | Syrupi, | f.ʒijj | |
| | Aquæ, | f.ʒix. | M. |
| Dessertspoonful every six hours, for a child a year old. | | | |

signs of cerebral palsy, apply a large *blister* to the nape of the neck, and rub the following pustulating ointment on the head:—

148. R.	Olei tigllii,	℥℥xv	
	Adipis,	℥ss.	M.

One-fourth part to be rubbed into the skin every eight hours, until an abundant eruption is produced.

Still more efficacious than these derivatives are *douche baths*, pouring cold water over the head from a pitcher held some distance above it. The patient almost always recovers consciousness as this is being done, but it must be repeated at intervals of a few hours to secure a permanent result; with each successive employment the number of pitcherfuls is to be increased. Frictions with *mercurial ointment* and continued doses of *calomel* are much employed.

J. S. RAMSKILL, M. D., LONDON.

The application of cold to the head, by *irrigation*, often produces an almost magical effect. A small stream of cold water should be allowed to run on the shaven head from a vessel placed a little above it. This method of treatment should be employed with caution in children and aged persons.

RÉSUMÉ OF REMEDIES.

Antimonii et Potassii Tartras has been exhibited in repeated fractional doses with benefit. It is contra-indicated if the patient be very young, if there have been prodromic symptoms, and if the inflammatory condition be not well marked.

Hydrargyrum. In regard to the use of mercury in acute meningitis, authorities differ. Dr. RUSSELL REYNOLDS has never seen any good results from its administration. Dr. J. S. RAMSKILL recommends it as a valuable remedy, and states that the system should be quickly brought under its influence, by combining with its internal administration (in small and frequently-repeated doses), the use of inunctions in the groin and axilla.

Opium is a most valuable agent in epidemic meningitis, when administered at the outset of the attack in cases in which the inflammatory predominates over the septic element.

Cathartics are indicated, unless the patient be very feeble (F. 146, 147).

EXTERNAL REMEDIES.

Cantharis. Blisters to the nape of the neck or vertex, although inadmissible during the acute stage of meningitis, are sometimes of great value after the excitement has passed.

Frigus. Cold affusions are recommended (p. 82).

Oleum Terebinthinæ. Turpentine stupes applied to the extremities, often do good, as also do turpentine enemata.

For Tubercular Meningitis, see Hydrocephalus.

NEURALGIA.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

When the neuralgia is superficial, compresses steeped in the solution of atropia have a good effect.

149. R. Atropiæ sulphatis, gr. v
Aquæ destillatæ, f. ʒiij.

Renew the compresses several times in twenty-four hours. Continue them for at least an hour each time, and cover them with oiled silk to prevent evaporation. This is the formula recommended by TROUSSEAU.

FRANCIS E. ANSTIE, M. D., LONDON.

1. CONSTITUTIONAL TREATMENT.—(a.) *Nutritive remedies*: fat, cod-liver oil, butter, etc. (b.) *Preparations of iron* are useful (the carbonate especially) only where there is actual anæmia. (c.) The *nerve tonics* (quinine, arsenic and zinc) are beneficial in some cases and not so in others. Sulphate of quinine is useful in malarial neuralgia, and also, in small doses, in some cases of non-malarial neuralgia, especially in ophthalmic branches of the fifth pair. Arsenic is useful, and more widely so than quinine, in both the above classes of neuralgia. Valerianate of zinc has also been employed with benefit. (d.) *Constitutional remedies* directed against a real or presumed depravation of the blood by some special poison; as, iodide of potassium and corrosive sublimate against syphilitic neuralgia; colchicum against gouty neuralgia; and iodide of potassium against rheumatic neuralgia.

2. *Narcotic stimulant remedies for neuralgia*.—At the head stands *opium*, represented by *morphia*. Next, *belladonna*, or more exactly, *atropia*. The *subcutaneous injections* of these substances are of considerable benefit. Best medium, hypodermic dose of morphia gr. $\frac{1}{4}$; or atropia gr. $\frac{1}{16}$ – $\frac{1}{8}$. Belladonna (gr. $\frac{1}{4}$ – $\frac{1}{2}$ of the extract), given by the mouth, has a special influence on painful affections of the pelvic organs. *Indian hemp*, internally (in pills of gr. $\frac{1}{4}$ – $\frac{1}{2}$, one every night), is very effective in certain forms of neuralgia, especially migraine and clavus. *Chloride of ammonium* (doses of gr. 10–20) is useful in migraine, clavus, intercostal and hepatic neuralgias. *Sulphuric ether* is supremely useful in certain visceral neuralgias, as gastralgia, uterine or ovarian neuralgia. *Turpentine* pearls are beneficial in sciatica. *Aconitia* is, ordinarily, too depressing. *Alcohol* is most useful taken at meals, or especially for the relief of pain.

3. EXTERNAL REMEDIES.—Flying *blisters*, of extreme and general use; *mustard plasters*; liniments and ointments (best is chloroform, diluted with 7 parts of oil liniment); and *electricity* (continuous low tension current from Bunsen's or Daniell's battery) are recommended.

A. BERTRAND, M. D., PARIS.

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|---------|-------------------|---------|----|
| 150. R. | Veratriæ, | gr. v | |
| | Morphiæ muriatis, | gr. iij | |
| | Adipis, | 3j. | M. |
- To be employed in friction during the paroxysms of facial neuralgia.

H. BOURDON, M. D., PARIS.

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|---------|-----------------------|---------|----|
| 151. R. | Morphiæ acetatis, | gr. iss | |
| | Chloroformi, | ℥iv | |
| | Olei amygdalæ dulcis, | f. 3iss | |
| | Ceræ albæ, | 3ss | |
| | Adipis, | 3v. | M. |

Melt together the wax and lard and add the oil; mix the morphia and chloroform by shaking together in a wide-mouth flaçon; add the melted wax and lard and shake until cold. To be applied to the painful parts several times a day.

C. E. BROWN-SÉQUARD, M. D.

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|---------|---------------------------|-------|
| 152. R. | Extracti belladonnæ, | gr. ¼ |
| | Extracti stramonii, | gr. ½ |
| | Extracti cannabis indicæ, | gr. ¼ |
| | Extracti aconiti, | gr. ½ |
| | Extracti opii, | gr. ¼ |
| | Extracti hyoscyami, | gr. ¼ |
| | Extracti conii, | gr. j |
| | Pulveris glycyrrhizæ, | q. s. |

For one pill.

According to circumstances BROWN-SÉQUARD gives, without producing any great constitutional disturbance, three, four, and even five pills in a day, and sometimes in about eight or ten hours, for the relief of neuralgic or other pains. There must be, therefore, some influence exerted by some of these substances upon the others, diminishing their bad and not their good effects. He recommends the following *hypodermic injection*:—

- | | | |
|---------|--------------------|---------|
| 153. R. | Morphiæ sulphatis, | gr. ¼-½ |
| | Atropiæ sulphatis, | gr. ⅒. |

For one injection, in gtt. xx of distilled water.

The doses BROWN-SÉQUARD at first employed were gr. ½ of the sulphate of morphia to gr. ⅒ of the sulphate of atropia. He now employs those given above, the antagonistic effects of morphia and atropia on the brain rendering it possible, while securing the good effects against pain of the two remedies, to use safely, or at least

without great or lasting cerebral or cardiac disturbance, large doses of these narcotics.

In this connection, we may give the doses employed by other authorities in administering morphia and atropia subcutaneously in neuralgia.

Dr. CHARLES HUNTER, of London, gives, as a rule, never to use, in the first injection, in any case, more than one-half the stomachic dose of these alkaloids for males, and not more than a third for females.

Dr. RUPPNER, of New York, places the minimum dose of morphia at gr. $\frac{1}{8}$; the maximum, gr. $\frac{1}{4}$; the minimum dose of sulphate of atropia, gr. $\frac{1}{16}$; the maximum, gr. $\frac{1}{8}$.

Dr. TILT, of London, states that the initial hypodermic dose of morphia (used alone) for a woman, should not exceed gr. $\frac{1}{4}$ (the acetate being the salt he prefers), and that of atropia should not exceed (used alone) gr. $\frac{1}{16}$. In combination, gr. $\frac{1}{4}$ of the sulphate of morphia with gr. $\frac{1}{16}$ of the sulphate of atropia.

PROF. HARVEY L. BYRD, M. D., BALTIMORE.

- | | | | |
|---------|---------------------------|--------|----|
| 154. R. | Olei menthæ piperitæ, | f.3iij | |
| | Olei origani, | f.3ij | |
| | Olei sassafras, | f.3j | |
| | Olei terebinthinæ, | f.3iss | |
| | Tincturæ opii, | f.3ss | |
| | Tincturæ aconiti radicis, | f.3ij | |
| | Alcoholis, | f.3ij. | M. |

For local application in neuralgia and chronic rheumatic pains.

DR. CAMINITI, ITALY.

- | | | | |
|---------|--------------------|-------|----|
| 155. R. | Morphiæ muriatis, | gr.xv | |
| | Collodii flexilis, | f.3j. | M. |

Apply by means of a small brush on the parts, the seat of the neuralgic pains. If the pain return periodically, give the sulphate or valerianate of quinine.

- | | | | |
|---------|---------------------|-------|----|
| 156. R. | Ammoniaci, | 3ijss | |
| | Spiritus lavandulæ, | m.xv | |
| | Camphoræ, | Div | |
| | Alcoholis, | f.3j. | M. |

This liniment is useful in tic douloureux. A compress moistened with it is applied to the painful part, covered with dry linen, and retained until the skin reddens; then the reddened skin is to be rubbed with a solution of morphia until the pain ceases.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

- | | | | |
|---------|------------|-------|----|
| 157. R. | Aconitiæ, | gr.iv | |
| | Veratriæ, | gr.xv | |
| | Glycerinæ, | f.3ij | |
| | Cerati, | 3vj. | M. |

To be rubbed over the painful parts, care being taken to see that there is no abrasion of the skin.

(Prof. GROSS sometimes employs veratria ointment in cases of neuralgia, of the strength of \mathfrak{zj} to \mathfrak{zj}).

158. R. Potassii bromidi, \mathfrak{zss}
 Succo conii, $\mathfrak{f.3x}$
 Aquam cinnamomi, ad. $\mathfrak{f.3ij}$. M.

A dessertspoonful to be taken three times a day.

Useful in epileptiform neuralgia.

159. R. Strychnis sulphatis, $gr.ss$
 Quinis sulphatis, $gr.xv$
 Cinchonis sulphatis, \mathfrak{zj}
 Pulveris rhei, \mathfrak{zss}
 Extracti gentianæ, q. s. M.

Divide into 30 pills. One to be taken four times a day, in intercostal neuralgia of malarial origin, associated with constipation.

DR. DUMAS, MONTPELLIER, FRANCE.

160. R. Castorei, $gr.xxx$
 Camphoræ, $gr.xv$
 Pulveris opii, $gr.vij$
 Confectionis rosæ, q. s.

To be divided into 15 pills, and used for nervous affections of the abdominal organs in women.

H. W. FULLER, M. D., LONDON.

Our author recommends highly the external application of aconitia in neuralgia, and in intercostal rheumatism. When from the situation or other circumstances, it is difficult to apply the ointment, he directs the following solution:—

161. R. Aconitis, $gr.ijj-iv$
 Spiritus rectificati, $\mathfrak{f.3vj}$
 Glycerinæ, $\mathfrak{f.3ij}$. M.

To be applied by means of a camel-hair brush until the pain is relieved. It should only be employed in chronic cases, it proving ineffective so long as there is acute action. Even when the relief of pain is only temporary, this is an advantage of no inconsiderable importance.

Another local application recommended by Dr. FULLER, is the following:—

162. R. Extracti belladonnæ, \mathfrak{zj}
 Tincturæ opii, $\mathfrak{f.3j}$
 Glycerinæ, $\mathfrak{f.3ij}$. M.

A piece of lint wet with this mixture, and covered with oiled silk, often affords great relief when placed along the course of the nerve.

The following local application is also often useful:—

163. R. Acidi hydrocyanici diluti, $\mathfrak{f.3ss}$
 Glycerinæ, $\mathfrak{f.3ss}$
 Aquæ rosæ, ss $\mathfrak{f.3ij}$. M.

To be painted over the seat of pain with a camel-hair brush.

oxysms of pain. In their use avoid the face; a good point is the inside of the arm.

170. R. Tincturæ aconiti, f. ʒss.
 Rub with a rag upon the painful part until a sense of pricking is felt.

This is next in value to the subcutaneous use of morphia. The action is often very powerful. Dr. H. once caused temporary paralysis of the arm in a lady, by the too free application of the tincture.

Chloroform may be used externally, internally, or by inhalation, not carried to insensibility. Repetitions of the inhalation may break up the paroxysm.

Hypophosphites are useful; may be given in doses of from ten to twenty grains. They act by setting free phosphorus in the stomach.

Galvanism.—The direct galvanic current may be successfully used both for the relief of the paroxysm and for breaking up the habit of the disease. For the first apply the poles so that the position is near the seat of the greatest pain, and pass the current continuously for several minutes. To change the habit of the system, apply one pole to the nape of the neck, and the other over the course of each sympathetic nerve, moving it along the neck. DUCHENNE says, that neuralgia can generally be relieved by Faradization. Dr. H. has not been so uniformly successful, but often effects a cure by the application mentioned.

The use of tea generally aggravates neuralgia, while coffee, on the contrary, does not, but if strong is often of service.

DR. RAIMBERT, FRANCE.

171. R. Extracti opii,
 Extracti belladonnæ,
 Extracti stramonii, ss gr. xv
 Aquæ laurocerasi, f. ʒiij. M.

Introduce from four to six drops of this solution into the ear, close the canal with cotton, and incline the head to the opposite side. A useful mode of treatment in facial and dental neuralgias.

PROF. P. RICORD, M. D., PARIS.

172. R. Extracti hyoscyami,
 Extracti belladonnæ, ss ʒj
 Glycerinæ, f. ʒj. M.

Anoint several times a day, with this liniment, the testicle affected with neuralgia. Employ at night suppository containing from one-half to three-fourths of a grain of the extract of belladonnæ.

173. R. Extracti belladonnæ, ʒss
Chloroformi, m℥
Glycerinæ, f.ʒss. M.
Anoint with this liniment, several times a day, the affected parts in neuralgia of the anus, when there exists neither fistula nor any lesion of the rectum.

THOMAS HAWKES TANNER, M. D., LONDON.

174. R. Quiniæ sulphatis, gr.xxiv
Extracti belladonnæ, gr.iv
Camphoræ, gr.xxx
Confectionis rosæ, q. s.
Divide into 12 pills. One to be taken two or three times a day, in cases of neuralgia in which the attacks are periodic.
175. R. Quiniæ sulphatis, ʒj
Liquoris arsenici chloridi, f.ʒiij-iv
Acidi sulphurici aromatici, f.ʒij
Syrupum zingiberis, ad. f.ʒiij. M.
One teaspoonful in two tablespoonfuls of water directly after breakfast, dinner and tea, in severe neuralgia.

176. R. Ammonii chloridi, ʒiij
Aquæ, f.ʒiij. M.
A tablespoonful in water every hour, while the paroxysm of pain is on. If after the fourth dose there be no diminution of pain, it will be useless to persevere. As soon as the pain is relieved the dose may be reduced to a dessertspoonful three times a day.

EDWARD JOHN TILT, M. D., LONDON.

177. R. Extracti hyoscyami, ʒj
Extracti belladonnæ, gr.v
Butyri cocosæ, q. s. M.
Make into 20 *suppositories*, round, in pill form. One to be introduced into the rectum at night. This is the suppository Dr. TILT most frequently prescribes, for it relieves pain without constipating.
178. R. Extracti opii, ʒj
Extracti belladonnæ, gr.x
Butyri cocosæ, q. s. M.
Make into 20 round *suppositories*. One to be well introduced into the bowel at night.
179. R. Morphisæ sulphatis, gr.iiij
Butyri cocosæ, q. s. M.
Divide into 6 *vaginal suppositories*. One to be used at night.
180. R. Liquoris opii (Battley's), f.ʒj
Tincturæ hyoscyami, f.ʒj
Aquæ, f.ʒiij. M.
One tablespoonful of this, or double the quantity, to be added to a little warm milk for an *enema*.
181. R. Morphisæ sulphatis, gr.viij
Atropiæ sulphatis, gtt.iv
Olei rosæ, gtt.ij
Alcoholis, f.ʒss
Oleum olivæ, ad. f.ʒiv. M.
For a liniment. To be shaken before use.

The sulphate of atropia is preferable to atropia, because it is more soluble, and oil is much better than glycerine as a constituent of liniments.

Another excellent, and elegant, and sedative liniment is the following:—

182. R.	Atropiæ sulphatis,	gr.viij	
	Morphiæ sulphatis,	gr. xvj	
	Aconitiæ,	gr.ij	
	Acidi sulphurici diluti,	m.v	
	Alcoholis,	f.℥ss	
	Oleum olivæ,	ad. f.℥iv.	M.

Or, if a stimulant effect is also desired,

183. R.	Chloroformi,	f.℥ss	
	Spiritus terebinthinæ,	f.℥j	
	Camphoræ,	℥ij	
	Olei lavandulæ,	m.xx	
	Oleum olivæ,	ad. f.℥vj.	M.

The first four ingredients should be mixed before adding the oil, and the liniment should be well shaken before it is applied.

184. R.	Atropiæ sulphatis,	gr.ij	
	vel		
	Morphiæ sulphatis,	gr.x	
	Glycerinæ,	f.℥ss	
	Olei neroli,	gtt.iv	
	Unguenti glycerinæ,	℥j.	M.

Make an ointment, to be rubbed into the skin twice a day.

DR. TOURNIÉ, PARIS.

185. R.	Zinci valerianatis	gr.v	
	Extracti opii,	gr.iss	
	Extracti hyoscyami,	gr.ijss	
	Confectionis rosæ	q. s.	

Divide into 6 pills. Give one every three hours until three are taken, in tic douloureux. Repeat the same medication the following day.

JAMES TURNBULL, M. D., LIVERPOOL.

186. R.	Extracti aconiti,	℥ij	
	Adipis,	℥ij.	M.

A useful ointment in neuralgic pains.

187. R.	Quiniæ sulphatis,	gr.vij	
	Morphiæ sulphatis,	gr.℥.	M.

Divide into 3 powders. Give one from hour to hour, in periodical neuralgia.

188. R.	Morphiæ sulphatis,	gr.iss	
	Sacchari,	gr.xxx.	M.

Divide into 6 powders. One morning, evening and night, in facial neuralgia.

AUGUSTUS WALLER, M. D., GENEVA.

Our author has found that certain substances, such as atropia, strychnia, morphia, and the tincture of aconite, when mixed with chloroform and applied to the skin, are absorbed rapidly; but if alcohol is used instead of chloroform, absorption is delayed or altogether prevented. The ability of introducing rapidly into the blood these active narcotics, without the use of the hypodermic syringe, will be of much importance in those cases in which even a slight puncture of that instrument is dreaded. It will also be of value in those instances in which it is necessary or advisable to keep up the effect for a long time, as in hydrophobia, chronic neuralgia, etc.

189. R.	Aquæ calcis,	f. ʒj
	Spiritus terebinthinæ,	f. ʒiiss
	Saponis,	q. s.

Introduce the lime water, the essence of turpentine, and a small quantity of soap in a matrass, shake, and add, little by little, more soap, until the mixture acquires the consistence of a pomade. Useful in pains of a neuralgic or rheumatismal character.

GUY'S HOSPITAL, LONDON.

190. R.	Liquoris plumbi subacetatis,		
	Tincturæ opii,		
	Mellis,	aa	f. ʒij
	Confectionis rosæ,		ʒj. M.

Make a liniment.

This is known in the pharmacopœia of the hospital as *linimentum plumbi opiatum*, and is much used.

LONDON HOSPITAL.

191. R.	Tincturæ aconiti,		
	Linimenti saponis,	aa	f. ʒj. M.

To be used as an anodyne liniment.

RÉSUMÉ OF REMEDIES.

**Acidum Arseniosum* is a remedy of a deservedly high reputation in neuralgia, having a wider range of application than quinine. In malarial cases it should be given in larger doses (m̄ x-xxx, thrice daily, of Fowler's solution) than in non-malarial. In the latter, m̄ v of Fowler or gr. $\frac{1}{8}$ of the *arsenate of sodium*, in pill, with extract of lupulin, will prove effectual in the cases amenable to this remedy. It may also be given hypodermically and endermically.

**Aconitum* is a remedy of great value in chronic cases of neuralgia, when the secretions are in order and the general health not much impaired. Its use should, therefore, be often preceded by purgatives and tonics. In acute cases it is not indicated before all signs of active disease

have been subdued by other means. Its external use should usually precede its internal administration, which need only be resorted to in case of failure of the former. The combination of quinine with aconite seems to increase its efficacy, and add permanency to the relief afforded by it. This combination is especially indicated in anæmic or debilitated patients, where there is no apparent nerve lesion or exciting cause.

Æsculus Hippocastanum. The alkaloid of horse chestnut, *esculin*, has been given in doses of gr.xv, twice daily, with success, by French physicians, in the treatment of periodic neuralgia.

Æther. In simple neuralgia, particularly of the nerves of the head, Prof. STILLÉ recommends combining the anodyne effect of ether with its revulsive effects, by applying it on small compresses covered with some solid substance, immediately over the points where the painful nerve emerges from its bony canal, or where it in any other way becomes superficial.

Alcohol. Dr. ANSTIE has several times observed, in acute neuralgia, that after large doses of various narcotics had been tried in vain, the first real and substantial relief was obtained by the use of a moderate dose of alcohol; the consequence of overdosing the remedy is, however, nearly always disastrous.

Ammonii Chloridum is often of signal benefit (F. 176).

Ammonii Valerianas is favorably spoken of by some writers.

Anthemis. Chamomile, in substance, in doses of gr.lx, or in a very concentrated infusion, is administered with success in France, in neuralgia of the fifth nerve.

Apiol is said to be of service in intermittent neuralgia.

Assafœtida is of little value in neuralgic affections.

**Belladonna*, whether used externally or internally, ranks among the first of the sedatives and anodynes of service in neuralgia (p. 83). It occasionally fails of effect, however. BROWN-SÉQUARD combines it with six other narcotics, for the relief of neuralgic pains (F. 152). *Atropia* is preferred by some to the preparations of belladonna, but the dose is more difficult to graduate.

Bebericæ Sulphas has proved successful in some cases, after the failure of quinine. In doses of gr.x, night and morning, it is more effective than in smaller doses.

Brominium. See *Potassii Bromidum*.

Caffea is much employed by Belgian physicians. Prof. HAMMOND finds that it is often of service, but that tea generally aggravates neuralgia.

Cannabis Indica is ranked as a neuralgic remedy, next in value to opium and belladonna, and their alkaloids.

Chloral is sometimes of service in this affection.

Chloroformum always acts as a palliative in, but rarely cures neuralgia.

Cinchona, see *Quinisæ Sulphas*.

Colechicum is recommended in conjunction with carbonate of ammonia and cinchona, by Dr. COPLAND. It should be preceded by cathartics.

Conium is occasionally useful, both externally and internally administered, but is inferior to opium and belladonna.

Creasotum has been given with success by Dr. ELLIOTSON in facial neuralgia.

Croton Chloral Hydrate, in doses of gr.ij every hour, has been found to promptly mitigate paroxysms of neuralgic pain.

Digitalis has proved of service in the hands of Dr. FULLER, in cases in which the pain is intermittent. He gives ℥x-xx of the tincture three or four times a day.

Fatty Remedies, like cod-liver oil, olive oil, butter and cream, are often of great service.

Ferrum (particularly Ferri Carbonas) is useful in cases associated with anæmia; in others it fails.

Galbanum has been found of service in neuralgia dependent upon uterine derangement, given as follows:—

192. R.	Pilulæ galbani compositæ,	gr.iiij-vij	
	Pilulæ hydrargyri,	gr.ij.	M.

One pill to be taken every other night.

Glonoïn (nitro-glycerin) in very small doses (one drop diluted with 100 of rectified spirit) has been recommended, but should be used with caution.

Guaiacum is of service in forms of neuralgia of a rheumatic character. From ℥xx to ℥xl of the ammoniated tincture may be given every five hours, until relief is obtained.

Hyoscyamus is considered by Dr. HARLEY as more efficacious than belladonna in neuralgic affections of the internal viscera.

Iodinium, see Potassii Iodidum.

Ipecacuanha. Dover's powder at night often affords much comfort. An eighth or a quarter of a grain of morphia may be added when indicated.

**Morphia*, hypodermically injected, affords speedy and often permanent relief. Dr. ANSTIE has cured cases by three or four injections of gr. $\frac{1}{4}$, which would have been very tedious under the older plan of treatment. Many cases yield in a week or ten days to hypodermic injections twice daily.

Nux Vomica has been used with occasional success.

Oleum Cajuputi may be employed with advantage, either externally or internally, in cases unconnected with inflammatory action.

**Oleum Morrhuæ* is sometimes successful after the failure of quinine and other ordinary remedies.

Oleum Terebinthinæ is not unfrequently of benefit. It is equally appropriate to the inflammatory and non-inflammatory states of neuralgia, and it is said relapses are less frequent after it than after most other remedies.

Oleum Tigllii has been used with success in some cases, in which it has seemed to exercise a special influence apart from its purgative action.

Opium, both internally and externally used, is of great service in certain cases; but ordinarily, far inferior to morphia injected subcutaneously (F. 160).

Oxygen inhalation sometimes relieves or cures neuralgia.

Physostigma has exerted local anodyne effects in several cases of neuralgia reported.

**Plumbi Acetas* is said to be a safe and effective remedy in many cases of superficial neuralgia, and even in neuralgia of the abdominal viscera.

**Potassii Bromidum*, in full doses, often effectually relieves some forms of neuralgia. Dr. DA COSTA sometimes prescribes it with conium (F. 158).

Potassii Chloras, in doses of gr. xxx a day, has, in three weeks' time, it is reported, produced wonderful effects in facial neuralgia.

Potassii Iodidum is of service in neuralgic affections dependent upon an inflammatory state of the nerve coverings.

**Quiniæ Sulphas* is of great value in all neuralgias of malarial origin, and in a certain number of non-malarial cases. In the former, it should be given in full doses (gr. v-xx) shortly before the expected attack; in

the latter, doses of gr. ij-ijj thrice daily are as large as are likely to benefit. Dr. ANSTIE says that he knows of no circumstances which indicate beforehand that quinine will be useful in non-malarial cases, excepting that in neuralgia of the ophthalmic branches of the fifth it is more effective than in other non-malarial neuralgias. Prof. GROSS frequently combines quinine with morphia, strychnia, arsenic and aconite, in the treatment of neuralgia (F. 168). Dr. TANNER combines it with belladonna and camphor (F. 174), and with the chloride of arsenic (F. 175).

Salix is recommended, but rarely used.

Sodii Arsenias is of service in neuralgia where other arsenical preparations are badly borne.

Sodii Carbonas, often, in full doses, speedily arrests neuralgia connected with acidity of the stomach.

Sodii Hypophosphis, in drachm doses, given in beef tea, thrice daily, has proved successful.

Stramonium is only found of benefit by Dr. FULLER, where the symptoms shift from limb to limb, but never when the disease is stationary.

Strychnia is of use in epileptiform neuralgia.

Valeriana exerts a favorable influence in neuralgia associated with hysteria. The ammoniated tincture may then be given combined with guaiacum.

Zinci Valerianas is a serviceable remedy in those cases in which the disease is purely nervous, and in those which accompany uterine derangement.

Cathartics are indicated when there is an overloaded state of the colon. Turpentine, by the mouth or by enema, and croton oil, are valuable purgatives in these cases.

Emetics are useful in commencing the treatment of neuralgia arising from dyspepsia, and in those cases which are regularly intermittent an emetic should be given an hour before the expected paroxysm.

**Stimulants.* Dr. ANSTIE has found, in some cases of acute neuralgia (particularly of the fifth nerve), that after the failure of various narcotics a moderate dose of alcohol has at once given relief. He also states that in certain chronic neuralgias of the aged, where the power of digesting ordinary food is almost suspended by reflex irritation, an almost exclusively alcoholic diet, continued for some time, occasionally works wonders.

EXTERNAL REMEDIES.

***Aconitia* locally applied over the seat of pain is a most powerful palliative in neuralgic affections. Dr. FULLER, having observed that it fails so long as signs of active disease exist, restricts its use to purely chronic cases (F. 161). Dr. DA COSTA sometimes prescribes it with veratria, in ointment (F. 157).

**Aconitum* is a valuable local application in chronic cases (F. 186). The tincture may be combined with chloroform (F. 165), with soap liniment (F. 191), or with turpentine, etc. (F. 154).

Acupuncture is of use after inflammation has subsided, in those cases in which there is effusion within the sheath of the nerve. It then promises speedy and effectual relief, but is useless, and may be prejudicial in all other cases.

Æther. The local application of atomized ether is now usually resorted to.

Antimonii et Potassii Tartras. Tartar emetic counter-irritation is sometimes employed over the affected part, but its use is disapproved of by Dr. FULLER, on account of the pain and discomfort it occasions.

Aqua Ammoniac. The following method of applying strong water of ammonia in neuralgia, is recommended by Prof. STILLÉ: Take small disks of cloth, about a half or three-quarters of an inch in diameter, and apply them, moistened with the ammonia, over such points in the course of the affected nerve as are tender upon pressure, or are the seat of spontaneous pain. Cover the pieces of cloth with coins, buttons, or other convenient bodies, to prevent evaporation. Cotton contained in a thimble and saturated with the caustic liquid forms a still more convenient arrangement. As soon as slight vesication occurs, the pain is relieved, yet not so thoroughly as when the same effect has been obtained by means of cantharides. The addition of morphia to the vesicating liquid renders its effects more prompt and certain.

Belladonna is much used externally (F. 162, 172, 173). TROUSSEAU highly recommends the external application of belladonna when the neuralgia is superficial. In such cases may also be employed a compress saturated with a solution of atropia (F. 149). DR. FLINT uses atropia in preference to belladonna, in liniments and ointments. These applications, however, are all inferior to the hypodermic injection of atropia.

* *Cantharis.* Blisters should be tried in cases of any severity; if the hypodermic injection of morphia and atropia has failed, flying blisters should be employed. DR. ANSTIE states that in numerous early cases, one or two flying blisters, applied successively over the different points in the course of the painful nerve, have at once and permanently arrested the disease.

Calor. The actual cautery and the moxa are sometimes employed in severe cases.

Chloroformum may be applied pure (especially serviceable when the pain is localized in a small space) or in liniments (F. 173, 183). "Gelatinized chloroform," made by incorporating 1 part of chloroform and 2 parts of white of egg, is a useful form for application.

Dry Cupping is recommended by Dr. GRAVES.

Electricity seems to be of service only in those cases of a purely neuralgic character, unconnected with irritation in distant parts of the body; then the continuous galvanic current is often of essential service. If employed before the pain has subsided, the interrupted current very generally aggravates the patient's sufferings. See Prof. HAMMOND'S remarks, p. 88.

Enemata of turpentine and of opium are often beneficial.

Frigus. Ice applied to the spine, by means of his spinal bag, is recommended by Dr. CHAPMAN.

Hydrargyri Iodidum Viridum. The following ointment has been strongly recommended:—

193.	R.	Hydrargyri iodidi viridi,	℥ij	
		Adipis,	℥j.	M.

Hydrocyanicum Acidum Dilutum is recommended locally by Dr. FULLER (F. 163).

** *Hypodermic Injections.* DR. ANSTIE says that the discovery of the hypodermic method has instituted a new era in the treatment of severe neuralgias. Atropia, or morphia, or the two combined, may be used. The face should be avoided in making the injection. Prof. BARTHOLOW says: "The neuralgias are best treated by the combined morphia and atropia solution. There are several reasons for this: much larger doses of morphia may in this way be injected without danger to the patient; and the larger the quantity, as BROWN-SÉ-

QUARD has shown, the greater the curative power. Morphia and atropia combined are more effective than either singly. The systemic effects during the time of maximum narcosis, and also after the narcosis has disappeared, are much less unpleasant and depressing when the two agents are combined than when morphia is used alone. Sometimes atropia is better borne than morphia, and *vice versa*: in this case, the agent whose effects are least unpleasant should be in excess." He recommends the following proportions: $\frac{1}{8}$ to $\frac{1}{10}$ of a grain of atropia, $\frac{1}{4}$ to $\frac{1}{2}$ of a grain of morphia. The physiological effects of atropia here predominate, but the toxic effects are guarded by the morphia. For the facial neuralgia of pregnancy he uses morphia alone. This treatment promptly cures the affection, a fact first pointed out by Dr. H. R. STORER, of Boston. "These cases, as is well known, are extremely obstinate under the old methods of treatment, and those who have suffered from them on former occasions are exceedingly grateful for the relief so promptly and permanently afforded by the hypodermic method." Dr. RUPPNER reports a number of cases of the various forms of local and general neuralgia treated with success by the hypodermic injection of the acetate of morphia. *Caffein* has also been found to relieve neuralgia when thrown into the subcutaneous cellular tissue. In one instance in the practice of Dr. ANSTIE, of severe neuralgia of the superficial branches of the circumflex in the shoulder, two successive injections of caffein (over the biceps) appeared to cut short the malady altogether. In a case of dorso-costal neuralgia, attending shingles, a daily injection of caffein, during five or six days, notably mitigated the pain on each occasion.

Iodoform has been recommended for local use in neuralgias, in the form of a saturated solution in chloroform.

**Leeches* applied along the course of the nerve often afford immediate relief after the failure of anodynes and other local measures. They are particularly indicated when there is inflammatory action or much vascular excitement.

Monarda. Oil of horsemint, in liniment, with camphor and laudanum, sometimes affords prompt relief.

Morphia is second to no remedy for the relief of neuralgia, employed *hypodermically* (see above). The *endermic* application (gr. $\frac{1}{4}$ —gr. $\frac{1}{2}$, sprinkled on a blistered surface over the seat of pain) is sometimes beneficial.

Oleum Cajuputi is occasionally of service locally applied, in cases unconnected with inflammatory action.

Oleum Tiglii, in liniment alone, or diluted with soap liniment, makes an excellent friction in many cases.

Opium is recommended locally by Dr. FULLER (F. 162), and others, but its use is inferior to the subcutaneous injection of morphia.

Rectal Suppositories of belladonna, hyoscyamus, and opium, are sometimes employed (F. 177, 178).

Sinapis. Sinapisms over the seat of pain often afford relief.

Stramonium is sometimes employed locally in the same manner as belladonna, to which, however, it is inferior.

Turkish Baths have been employed in some cases with advantage.

Vaginal Suppositories (medicated pessaries) are also occasionally used. They are highly recommended by Dr. TILT (F. 179).

Veratria, when there are no active or inflammatory symptoms present, is often beneficial, externally applied, the ointment being rubbed in diligently until it causes a sense of heat and tingling. It is inferior, however, to aconitia (F. 150, 157).

PARALYSIS.

F. W. HEADLAND, M. D., LONDON.

Strychnia is only successful in paralysis in cases where the injury to the nervous centre has healed up, and when the limb continues paralyzed merely because the motor nerves have lost the power of transmitting the necessary impulse, from having been so long unaccustomed to discharge this office. On the other hand, when the lesion of the nervous centre is of recent occurrence, or when it has been of so serious or extensive a nature as to admit of no repair in the course of time, the remedy will be ineffectual.

CHARLES HUNTER, M. D., LONDON.

Strychnia is a useful remedy, given hypodermically, in paralysis. If, however, after three or four injections, improvement does not take place, it is almost useless to continue its employment.

SIR THOMAS WATSON, LONDON.

No good can reasonably be expected from *strychnia*, but much harm, unless the cord be free from organic disease. The *tincture of cantharides* has sometimes a very beneficial effect in thirty-minim to half-drachm doses.

RÉSUMÉ OF REMEDIES.

Aloetic purgatives often prove beneficial conjoined with *nux vomica*.

Ammonii Formias is recommended by Dr. RAMSKILL as a stimulant in cases of chronic paralysis accompanied by general torpor.

Argenti Nitras, in doses of gr. $\frac{1}{2}$ -j daily, has been employed with success, by BOUCHUT, in paraplegia and progressive general paralysis, resulting from sexual or alcoholic excess.

Arnica has been employed with good results.

Cantharis. Sir. THOMAS WATSON recommends tincture cantharides in paraplegia. Generally, when it does good, it acts as a diuretic.

Cinchona. Full doses of quinine promptly break up intermittent paralysis.

Ergota is recommended in those forms of paralysis arising from spinal congestion, in paraplegia complicated with menstrual irregularity (MEADOWS), and in the constipation of the paralytic, after the most powerful cathartics have failed (WARING CURRAN).

Ferri et Strychniæ Citras is serviceable in paralysis associated with anæmia.

Hydrargyrum. Dr. MAUDSLEY says: "To administer mercury systematically in general paralysis, as has been done, is as unaccountable in theory, as it undoubtedly is pernicious in practice."

Nux Vomica. See *Strychnia*.

Oxygen inhalations have been employed by Dr. RAMSKILL.

Petroleum has proved serviceable, used externally and internally.

Phosphorus has been successfully employed in some cases, in the form of the oil (made by gently warming 2 parts of phosphorus in 100 parts of almond oil, in a closed flask, for about twenty minutes, and decanting off, when cool, the oil from the undissolved phosphorus. Dose, gtt.iiij-viii, in emulsion, or with cod-liver oil).

Potassii Iodidum occasionally proves successful in some forms of paralysis.

**Strychnia* is a remedy much prescribed in paralysis, but very variously reported upon. The different results obtained in different hands have been accounted for by the impurity of the drug, the inability of the patient to bear the remedy, and its injudicious application to all forms of the disease. When the brain is still in a disordered state, and sanguineous effusion exists, it will prove injurious rather than beneficial, having the effect of exciting inflammatory action. When, however, the effusion has been absorbed, and the paralysis continues, as it were, from habit, strychnia will be found of great service. It is most beneficial in those forms of paralysis not dependent upon disease of the nervous centres, as in lead, mercurial and rheumatic palsies. See opinions of Drs. HEADLAND, HUNTER, and Sir THOMAS WATSON (p. 97).

As for the manner of administering strychnia in paralysis, it may be commenced in doses of $\text{gr.}\frac{1}{32}$ — $\frac{1}{16}$ two or three times a day, and the quantity cautiously increased. After continuing it for a few days or a week, slight convulsive twitchings or a creeping sensation will be experienced in the paralytic limb. It should then be discontinued for two or three days, and resumed as before.

It may be employed hypodermically with great advantage in some cases.

Sulphur gives very good results, according to Dr. GRAVES, in paralysis of an asthenic or chronic character, when employed as a sequel to a course of strychnia. He uses it in the form of an electuary and in baths.

Toxicodendron is recommended by TROUSSEAU in paraplegia from concussion of the spinal marrow, administered as follows: gr.v the first day of treatment, increased daily by the same amount until gr.lx a day are reached. It is asserted that it strengthens rather than enfeebles digestion, and causes no inconvenience other than occasionally slight strangury.

EXTERNAL REMEDIES.

A Armoracæ Radix. Poultices of fresh horseradish root form a ready counter-irritant in paralytic affections.

Cajuputi Oleum makes an excellent embrocation for paralytic limbs. Diligently rubbed in it stimulates the parts and relieves pain when present.

Delphina is believed, by Dr. TURNBULL, to be more useful in paralysis than veratria, from its property of exciting the circulation in the affected part.

Mucuna. The setæ maintained on the affected limb by a bandage have been employed as a local stimulant in paralysis.

Myristica. The oil, diluted with soap liniment, forms a useful stimulating embrocation.

Oleum Tigllii, in liniment, with or without the addition of soap liniment, may be employed with advantage as a stimulating friction.

Petroleum has proved serviceable in some cases.

Rosmarinus is a useful ingredient in ointments and liniments, to be rubbed over paralyzed muscles.

Sinapisms, with the addition of powdered capsicum, act as speedy derivatives, useful in some cases of paralysis.

Sulphuricum Acidum. The following ointment, perseveringly employed, has resulted beneficially:—

194. R. Acidi sulphurici, f.ʒj
Adipis, ʒj. M.

It acts as a powerful irritant.

Veratria ointment, diligently used, has occasionally been followed by great improvement.

Cold Shower Baths, in cases of paralysis consequent on severe inflammatory attacks of the brain and spinal column, are often attended with benefit, but sometimes fail, and may even aggravate the symptoms.

Turkish Baths, cautiously employed, sometimes benefit.

Cantharis. Blisters to the spine are useful when there is reason to expect effusion within the theca.

Electricity, carefully employed, is highly beneficial in appropriate cases. It should never be resorted to in recent cases, if there be reason to suppose that effused blood or coagulum remains unabsorbed, nor so long as there are any febrile or inflammatory symptoms present. It is of no benefit in cases with organic lesion of the nervous system. Its greatest utility lies in cases of purely *local* paralysis. Great and terrifying shocks are rarely beneficial where small and repeated shocks have failed. Both faradization and galvanism have been employed with success. Electro-puncture has been used with good results in paraplegia and hemiplegia.

Frigus. Ice to the spine is recommended by Dr. CHAPMAN.

Issues and Setons are sometimes employed with advantage.

Leeches at the verge of the anus are beneficial, where there is suppression of a habitual discharge, as from piles.

HYSTERICAL PALSY.

**Cantharis.* Dr. RUSSELL REYNOLDS says that he knows of no mode of treatment in hysterical paralysis comparable in efficiency with that of placing narrow strips of blister completely around the affected limbs. It succeeds perfectly and rapidly, after all other measures have failed, and is worthy of trial in all cases.

LEAD PALSY.

**Strychnia* is of especial benefit in this form of paralysis.

Galvanism proves highly beneficial in these cases.

MERCURIAL PALSY.

Argenti Nitras has been employed with success. The dose should be gr.ʒ daily, at first, and gradually increased until gr.ʒij in the course of the day are taken.

**Electricity* is very useful in these cases.

**Potassii Iodidum* is useful in very small and cautiously increased doses.

**Strychnia* is very beneficial in this form of paralysis.

Sulphur Baths are considered, by Dr. LITTLETON, almost as a specific in mercurial palsy.

RHEUMATIC PALSY.

Contum has been successfully employed in some cases.

**Strychnia* is of great benefit in most cases of paralysis resulting from rheumatism.

**Electricity* is employed with the same great advantage in this, as in lead and mercurial palsies.

PROGRESSIVE LOCOMOTOR ATAXIA.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

Persistent counter-irritation over the spine (by *blisters*, *moxa*, *actual cautery*, or *ice*) is indicated, cautiously employed. *Phosphorus*, in the form of phosphates of metals and salts, of *diluted phosphoric acid* as a drink in the daily allowance of water, and of *phosphate of sodium* as an aperient, may be given with advantage. *Nitro-muriatic acid* as a tonic, and *cod-liver oil* as a dietetic, may be of use. Flannel should be worn next the skin, and a chamois leather jacket over it. The diet ought to be of the most nutritious character. *Cannabis indica* and *belladonna* give the greatest relief to the pains.

If used at all, *electricity* ought only to be employed during the pauses in the course of the disease, and then with great caution, in the form of a constant current, rather than the induced current in faradization.

W. LAMBERT, M. D., AMHERSTBURG, ONTARIO, CANADA.

195. R. Acidi phosphorici diluti, ℥vj
Syrupi, f.℥ij.

A teaspoonful in water thrice daily, gradually increased to a dessert-spoonful, together with the application of electricity (*New York Medical Journal*, February, 1869).

PROF. TROUSSEAU, PARIS.

Our author advises not to employ setons, moxas, etc., along the spine, as they cause great pain and irritation, and do no possible good. *Electricity* is the great remedy which he recommends, combined with *flagellations* prudently employed, with *belladonna* to abate pain, with *sulphurous baths*, which have been very successful. *Hydrotherapy* may be of great service in the constitutional treatment, as well as other appropriate remedies of a like action. Preparations of *mercury* and of *iodide of potassium* are of great good, where there exists a syphilitic taint. TROUSSEAU recommends his "compresseur" of the prostate in the spermatorrhœa which sometimes attends the outset of the disease. *Turpentine* is useful in the vesical manifestations of the malady. Hygienic rules are to be strictly observed.

PROF. EBEN. WATSON, M. D., GLASGOW.

196. R. Tincturæ physostigmatis, ℥v-xxv.
For one dose, to be given every half hour.

Five minims of the tincture equals one-half grain of the extract of calabar bean. (*The Practitioner*, September, 1869).

RÉSUMÉ OF REMEDIES.

* *Argenti Nitras* is recommended by Dr. ALTHAUS, as useful in a large proportion of cases (*Lancet*, December 30th, 1865). It should be given in doses of gr. $\frac{1}{8}$ — $\frac{1}{4}$ two or three times daily. Its combination with hypophosphite of soda seems to add to its efficacy. After its use has been continued for four or six weeks consecutively, its administration should be interrupted for two or three weeks, and a slightly aperient mineral water given. The nitrate may then be resumed for a month or two. The gums should be carefully watched, and on the appearance of the slightest blue coloration, the remedy should be discontinued. Nitrate of silver has been thus employed in ataxia with variable success. In some cases it disagrees, and has to be stopped; in others it seems without effect, but in the majority of cases it has proved very useful. It is a remedy upon which considerable reliance can be placed in this disease.

Belladonna and *Cannabis Indica* are both said, by Dr. AITKEN, to give great relief to the pains.

Hydrargyrum is advised, by Prof. TROUSSEAU, when the syphilitic taint is present.

Nitro-muriaticum Acidum is an excellent tonic in these cases (p. 100).

Oleum Morrhuæ is of use as a dietetic.

Phosphorus is recommended by Dr. AITKEN. The administration of the phosphates of the metals and salts may be conjoined with the use of dilute phosphoric acid as a drink, in the daily allowance of water, and with phosphate of soda as an aperient (F. 195).

Physostigma has been used with advantage (F. 196).

Potassii Iodidum has been employed, but not very favorably reported upon. It is useful where there exists a syphilitic taint.

EXTERNAL REMEDIES.

Counter-Irritation over the spine, by blisters, actual cautery, moxa, or ice, persistently but cautiously employed, is sometimes resorted to, but the practice is deprecated by TROUSSEAU (p. 100).

* *Electricity* has been employed with good results. Dr. AITKEN says it must be resorted to with great caution, and only during the pauses in the disease (p. 100). Prof. TROUSSEAU highly recommends its use. Prof. NIEMEYER considers it a very active remedy, but cannot claim any success from its use, though he has had an excellent apparatus in his clinic, and treated all his cases with it during four years, in the manner advised by REMAK. He intends hereafter to continue the use of electricity, but instead of letting the current act on the spinal column, as hitherto, he will try the current through the spinal nerves, as advised by BENEDICT.

Sulphur Baths are recommended by Dr. ALTHAUS as an adjunct to the nitrate of silver treatment. They relieve the pain and diminish the numbness (*Lancet*, December 30th, 1865).

SCIATICA.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

197. R. Emplastri epipasticæ. 1½in.x5in.
 To be applied over the affected part. Let it draw for five or six hours,
 poultice it, and then remove the cuticle and dress with
198. R. Morphis sulphatis, gr ½
 Pulveris marantæ, gr.ij. M.
 For 1 powder. Also ten grains of Dover's powder, to be taken, at
 night.

DR. LABORDE, FRANCE.

199. R. Olei terebinthinæ, f.ʒviij
 Chloroformi, aa
 Tincturæ opii, f.ʒij. M.
 A useful liniment in sciatica. To be rubbed on by means of a piece
 of flannel, several times a day.
200. R. Aquæ ammoniæ, f.ʒv
 Olei terebinthinæ, aa
 Olei amygdalæ dulcis, f.ʒj. M.
 Rub on three times a day, in obstinate sciatica.

PROF. FELIX VON NIEMEYER, M. D., TUBINGEN.

201. R. Olei terebinthinæ, f.ʒj
 Mellis, f.ʒj. M.
 For an electuary. A tablespoonful twice daily.

ROMBERG also speaks very highly of this as a specific remedy in
 the treatment of sciatica.

THOMAS HAWKES TANNER, M. D., LONDON.

202. R. Sodii sulphatis, ʒij-iv
 Sodii carbonatis, ʒj
 Sodii chloridi, gr.xv
 Cretæ preparatæ, gr.x
 Ferri carbonatis saccharatæ, gr.xv. M.
 Make a powder and direct it to be taken early in the morning, in half
 a pint of water.

In some cases in which Dr. T. could detect no cause for the
 sciatica, a cure has been effected by this treatment, with the use of
 the hot-air bath twice a week.

EDWARD WAKES, M. D., LONDON.

203. R. Extracti ergotæ fluidi, f.ʒij
 Aquæ cinnamomi, f.ʒij. M.
 A dessertspoonful in water every four hours.

Tinctura ferri chloridi may be added if indicated. When ergot is likely to be useful, its good effects commence immediately.

RÉSUMÉ OF REMEDIES.

Aconitum is, in the opinion of Dr. FULLER, not only a valuable and efficient remedy in many obstinate forms of this disease, but is also safe and manageable, when properly administered and carefully watched.

Ammonii Chloridum is recommended by Dr. ANSTIE in the milder cases of sciatica occurring in the young.

* *Atropia*, hypodermically, is a successful form of treatment, now much employed.

* *Belladonna* is one of the most valuable sedatives and anodynes we possess in this affection.

* *Cannabis Indica* ranks next in value to belladonna and opium.

Conium is sometimes of service, and may be resorted to when belladonna and opium fail or are contra-indicated.

Creasotum has been employed internally by Dr. ELLIOTSON, with apparent benefit.

Digitalis is recommended by Dr. FULLER as a reliable remedy, when the pain is intermittent and of a purely neuralgic character. He gives either the powdered leaves (gr. j-iss), or the tincture (℥x-xx thrice daily).

Ergota has been advised (F. 203).

* *Morphia*, given hypodermically, affords speedy and often permanent relief. It may also be employed endermically (F. 198).

Nitro-muriaticum Acidum, in full doses, (℥vi-x), is an effectual remedy in sciatica accompanied with malaria. Its action should be aided by an occasional brisk purgative, the cold shower bath, or a cold douche down the spine, followed by friction and change of air and scene.

Oleum Tygii has been employed with success internally.

Opium, although of great occasional service, is less used since the introduction of the more effective treatment by the hypodermic injection of morphia.

Potassii Iodidum is strongly advised by Dr. GRAVES, in doses of 3j in the course of the day, dissolved in a decoction of sarsaparilla, in cases of a subacute or chronic character, and where the patient has to follow his out-door avocations.

Strychnia is inadmissible in acute or inflammatory cases, but in others, nuxvomica has been used with occasional success.

* *Terebinthinae Oleum* is considered by Dr. ANSTIE as a remedy worthy at least a trial, in doses of ℥x thrice daily, in the more obstinate cases of sciatica. It is, however, usually very disagreeable to the patient. Dr. NIEMEYER also recommends it in electuary (F. 201), and Dr. ROMBERG speaks of it almost as a specific.

Cathartics are often indicated and of service.

EXTERNAL REMEDIES.

Aconitia is a very certain and powerful palliative applied over the seat of pain (F. 157, 161).

Aconitum is frequently employed externally (F. 154, 165, 186, 191).

Acupuncture is limited to purely chronic cases, and to those in which there is effusion within the sheath of the nerve. In appropriate cases, it promises speedy and effectual relief.

Belladonna may often be employed with benefit as a local application (F. 162).

Cantharis. Great and immediate relief sometimes results from applying a blister to the heel.

Chloroformum is advised externally by Dr. FULLER, who says that a strip of flannel, soaked in chloroform, placed along the course of the nerve, and covered with oiled silk to prevent evaporation, proves sometimes extremely serviceable.

Morphia may be employed endermically (F. 198), but its use in this way is inferior to subcutaneous injection. See Hypodermic Injections, below.

Opium is often used externally (F. 162).

Pix Burgundica. Enveloping the whole thigh in a Burgundy pitch plaster, has, according to TROUSSEAU, cured sciatica after the failure of blisters and the endermic use of morphia.

Sulphur, externally, is highly praised by Dr. FULLER, who finds it very generally efficacious and worthy of a trial in every case, when all active symptoms have been subdued or are absent. He sprinkles a piece of new flannel, thickly, with precipitated sulphur, encases the whole limb in this, from the foot upward, and covers it with oiled silk or gutta-percha, which has the effect not only of increasing the warmth and confining the vapor of the sulphur, but of obviating the odor, annoying to the patient. It should be kept applied night and day. Absorption takes place rapidly, and the breath, urine, stools and perspiration unmistakably attest its presence in the system.

Dry Cupping often proves beneficial.

Electro-puncture, which should only be applied during the intermissions of pain, is sometimes serviceable.

Hypodermic Injections. Prof. BARTHOLOW strongly recommends *Atropia* hypodermically. He says: "The principal triumphs of atropia over neuralgia have been in cases of sciatica. It is now admitted that atropia is one of the best remedies for this disease. First proposed and used by Mr. HUNTER, it was afterwards employed by BÉNIER, COURTY, OPFOLZER, LORENT, and others. It has been found, however, that distant injection, and even injection into the subcutaneous tissue of the affected thigh, do not produce such good results as throwing the fluid deeply into the neighborhood of the affected nerve. More frequently, indeed, than in any other form of neuralgia, except the most obstinate and protracted cases of tic douloureux, the nerve itself, or its sheath, has undergone structural alteration; the limb is often diminished in size, its temperature and sensibility lowered, and the power of its muscles impaired. Under these circumstances more advantage is to be derived from local than from distant injection, just as LUTON, BERTIN, and RUPPNER have cured such cases by the injection of irritants into the affected parts. In severe cases of sciatica gr. $\frac{1}{8}$ of sulphate of atropia may be injected; but it should not be forgotten that this quantity will excite very severe symptoms in susceptible subjects. Generally gr. $\frac{1}{4}$ will produce decided atropinism. Cessation of the pain is not immediate upon the systemic effects, as Mr. HUNTER originally pointed out; indeed, the pain is often at first increased, but improvement takes place after a variable interval, and is often more permanent than after the morphia injection." When atropia fails *Morphia* may be tried, or both may be employed together. Morphia injected into the thigh, four inches below the hip joint, and over the course of the nerve, has been called "almost the only remedy for sciatica." Prof. BARTHOLOW says, in regard to the subcutaneous use of morphia, that "in severe and protracted cases, in which changes in the nerve and in the nutrition of the limb have taken place, permanent relief cannot always be guaranteed to the patient; but the injections, steadily continued in the maximum doses, will, in a great majority of cases, effect a cure finally."

TETANUS.

PROF. ROBERTS BARTHOLOW, M. D., CINCINNATI, OHIO.

Of all the remedies which have been proposed for tetanus, *physo stigma* must be regarded as the most useful. All cases treated by calabar bean are not managed with equal judgment and skill. Dr. FRASER has indicated (*The Practitioner*, vol. i, p. 83) the following mode of using it: Commence the treatment by subcutaneous injection; repeat such injection until the system is decidedly affected, then administer the remedy by the mouth, in a dose three times as large as is found necessary by subcutaneous injection. This plan may be safely followed, even in a child of nine years. If the administration by the mouth continue to produce remedial effects it should be persevered with; but in severe cases, subcutaneous injection should alone be employed, and it should always be preferred when severe and continued spasms occur, when a fatal result is imminent from exhaustion, and when apnoea threatens a fatal termination. No arbitrary rules of dosage can be laid down. For an adult, gr. j of the extract, by the mouth, or gr. $\frac{1}{2}$, by subcutaneous injection, will generally suffice to begin with. This should be repeated in two hours, when its effects will usually have passed off, and the succeeding doses modified according to the experience thus gained. The doses are to be continued in increasing quantities until the physiological effect, in diminishing reflex excitability, is produced, or until the sedative action of the drug on the circulation is carried to a dangerous extreme, or until constant nausea and vomiting compel a discontinuance.

WILLIAM FENWICK, M. D., GLASGOW.

204. R. Pulveris physostigmatis,
Pulveris rhei, ss ʒi. M.
Divide into 20 powders. One to be taken every four hours during the
day, also an occasional dose at night, making the average quantity
of fifteen grains of each in twenty-four hours.

Under the influence of this combination, Dr. F. has seen none of the depressing effects which the bean produces by itself. He reports (*Glasgow Medical Journal*, May, 1869) the improvement under this treatment as marked.

DR. E. FICK, REVAL.

205. R. Morphine sulphatis, gr. ʒ
Aque, ℥vj. M.
For one hypodermic injection, between the shoulder blades, near the spine.

G. OLLIVER, M. D., LONDON.

206. R. Atropiæ, gr. $\frac{1}{16}$.

In the form of a granule, one every three hours; and linimentum belladonnæ to be rubbed over the spine and rigid muscles every six hours.

A successful case of treatment by this method is reported in the *British Medical Journal* for August 22d, 1868. The patient was kept under the influence of atropia for three weeks. He then quickly and completely recovered his usual health under iron and quinine.

C. V. RIDENT, M. D., LONDON.

207. R. Extracti physostigmatis, gr. viij
Alcoholis, f. 3j. M.

The extract of calabar bean to be well rubbed down in the alcohol. The dose is ten minims (gr. $\frac{1}{3}$ of the extract).

Our author records (London *Lancet*, October 31st, 1868) a case of traumatic tetanus in which this dose, ten minims of the tincture, was given every hour. It appeared to retard the progress of the case and to ameliorate the severity of the symptoms, but never fully to control them.

The following directions are given in the *British Pharmacopœia* for making the

EXTRACT OF CALABAR BEAN.

208. R. Calabar bean, in coarse powder, 1 pound
Rectified spirit, 4 pints.

Macerate the bean for forty-eight hours, with one pint of the spirit, in a close vessel, agitating occasionally, then transfer to a percolator, and when the fluid ceases to pass, add the remainder of the spirit so that it may slowly percolate through the powder. Subject the residue of the bean to pressure, adding the pressed liquid to the product of the percolation; filter, distill off most of the spirit, and evaporate what is left in the retort, by a water-bath, to the consistence of a soft extract.

B. ROEMER, M. D., ST. LOUIS, MISSOURI.

According to our author (St. Louis *Medical and Surgical Journal*, July, 1873), a good summary of the treatment of tetanus is as follows:—

1. *Division of a nerve* can be of benefit only if practiced very early; amputation is similarly practicable, but generally of little avail, because decided symptoms have already been developed.

2. *Local applications* and general attention to the wound are of the utmost importance, to prevent complications, and to insure local quietude and avoid derived irritation. *Fresh air* is, for a like reason, instrumental in successful management of tetanus.

3. General and unconditional *quiet* and *rest* around the patient are enjoined; all noises, even to speaking in an elevated tone, are to be interdicted, remembering that sudden death has often followed after exciting impressions.

4. *Supporting nourishment*, in concentrated form, and stimulants, should supply the exhaustion in a disease which is not characterized by disorganization of any vital organ.

5. In cases where the patient is plethoric, the pulse full but not frequent, and where there exists a disposition to, or symptoms of, isochronic inflammatory action, *venesection*, *leeching* and *cupping* are indicated in the outset, and should be promptly but carefully practiced. The subsequent action of the therapeutic agent is thereby rendered more certain.

6. *Purgatives* of prompt action are necessary in all instances, and should be repeated and interchanged, until a desired effect is obtained, aided by enemata if demanded.

7. *The selection of the anti-tetanic* should be made according to the most promising statistics on tetanus.

PROF. EBEN. WATSON, M. D., GLASGOW.

209. R. Tincturæ physostigmatis,

M.V.-XXV.

For one dose, to be given every half hour.

Five minims of the tincture equals one-half grain of the extract of calabar bean.

RÉSUMÉ OF REMEDIES.

**Aconitum* in large doses has been employed by a number of practitioners, and deserves further trials. There seems to be great tolerance of the drug in this disease. It acts by diminishing the irritability of that portion of the nervous centre which controls reflex muscular action.

**Ether* has been found to be very useful in arresting tetanic symptoms in the wounded. Cases, both of idiopathic and traumatic tetanus, cured by the inhalation of ether, have been reported.

Alcohol. Stimulants, first proposed by Dr. Rush, in this disease, are now rarely trusted to alone. Large doses of wine, brandy and porter, have been given with success, in a number of reported cases.

Allium has been administered internally, in this disease, and by frictions along the spine and limbs, with alleged success.

Antimonii et Potassii Tartras has, it is said, proved effectual in nauseant and emetic doses.

**Atropia* and *Belladonna* have been successfully employed in a number of cases (F. 206). *Atropia* is given also hypodermically, but with uncertain results.

Brominium, see *Potassii Bromidum*.

**Cannabis Indica* has been largely employed, but with very diverse results. It has been given in the form of the extract (gr. iij) or of the tincture (℥xxx.), repeated every half hour, hour, or two hours, the object being to produce and maintain narcotism.

Chloral appears to have been efficacious in a number of cases.

**Chloroformum*. The inhalation of chloroform in small and frequently repeated doses, with a large admixture of air, relieves the muscular spasms when it fails to produce a lasting benefit. By some recent writers it is claimed to be the agent which has cured the most cases. Chloroform frictions are also recommended.

Colchicum has been used, but not with very satisfactory results.

**Conium* is regarded by Dr. HARLEY as the natural antagonist of this disease, but to be effectual large doses of the succus must be given. If the patient cannot swallow, from f.3vj-xij of the succus, warmed to the temperature of the body, should be injected into the bowels, and repeated every two, three or four hours, according to the condition of the muscles.

Glonoïn. Nitro-glycerin has been employed, but must be given cautiously.

Morphia has been frequently used hypodermically in this disease; see Hypodermic Injections below.

Nicotia has been given hypodermically. Internally nicotine, in doses of gtt.ss-ijs in sherry and water, several times a day, has been employed with success. The alkaloid has the effect of relaxing the muscles, stopping the delirium, and producing profuse sweating, which exhales a strong odor of snuff. So powerful a poison must be given with caution.

Nitrite of Amyl, by inhalation, has been exhibited with success in traumatic tetanus.

Nux Vomica, see *Strychnia*.

Oleum Terebinthinæ, internally, or by enema, sometimes exerts a beneficial influence. It may be used as an adjunct to other remedies.

Opium has been given in large doses, but is inferior, in this disease, to aconite, belladonna, chloroform, or physostigma. Dr. RUPPNER recommends the hypodermic injection of gtt.xxv-lx, of liquor opii compositus, in the back, near the spinal column.

**Physostigma* is a remedy of much value; and one of which there is great tolerance in this disease. Dr. FRASER, of Edinburgh, is in favor of subcutaneous injections, especially in severe cases (*Practitioner*, August, 1868), but Dr. EBEN. WATSON, who has had great experience in its use, has failed to obtain, in this way, any very decided effect. He prefers to prescribe the alcoholic extract in solution, as a weak tincture; but should the stomach reject this, he gives a double dose in a starch-water enema (*Practitioner*, April, 1870). He agrees with Dr. FRASER in the necessity of giving it in large and repeated doses, the sole limit being the complete subsidence of the tetanic spasms, or the development of the poisonous effects of the drug to a dangerous degree. The strength of the patient must also be well supported by fluid nourishment, and stimulants. *Physostigma* may fail, however, even when its full physiological effects have been produced (F. 204, 207, 208, 209).

Potassii Bromidum, in doses of gr. xx-xl, every two or three hours, has been given in a number of reported cases of idiomatic and traumatic tetanus, with markedly favorable effects.

Quiniæ Sulphas, has been used, but is of doubtful power.

Strychnia, in doses of gr. $\frac{1}{12}$ – $\frac{1}{8}$, every two hours, has been employed with benefit.

Tabacum. Enemata have been employed with success in the hands of some practitioners, but have failed entirely in others. Their strength should never exceed, gr. xxx of the leaves in Oss of water, and ammonia, brandy and other stimulants must be given, to prevent too great depression. The topical application of tobacco has been recommended in traumatic tetanus, a strong infusion of cavendish tobacco being applied to the wound and surrounding parts, previously blistered; in idiopathic tetanus, it being applied to a blistered surface over the spine. See, also, *Nicotia*.

Woorara, in large doses hypodermically, gr. $\frac{1}{8}$ – $\frac{1}{4}$ – $\frac{1}{2}$ is successful in the hands of SPENCER WELLS and others. It has not, however, justified the confident hopes that were at first entertained of its powers in tetanus.

Cathartics are useful in most cases.

EXTERNAL REMEDIES.

Actual Caution, applied to the wound, in traumatic tetanus, was proposed by LARREY.

Baths. Warm baths, 97°–100° F., of three to four hours' duration, repeated daily, have been advised.

Blood-letting. When there exists a disposition to isochronic inflammation, and the patient is plethoric, and the pulse full, venesection at the onset has been advised.

Cantharis. Prof. STILLÉ states that in tetanus, "even when of traumatic origin, blistering on either side of the spinous processes and throughout the entire length of the spine, is an important if not an essential element of treatment. It is possible, though not certain, that the endermic use of the salts of morphia on the parts thus denuded adds greatly to the efficacy of the vesication. It were, perhaps, better to introduce the narcotic by inoculation."

Chloroformum. Chloroform frictions are said to afford relief.

Electricity. Dr. MENDELL, of Berlin, has successfully treated two cases by the local application of a gentle current of electricity to the affected muscles, with the apparent effect of subduing the excessive irritability of the sentient nerves. When a strong current is directed to the cord, powerful contractions result. The positive pole should be directed to the antagonists of the affected muscles.

Frigus. *Cold Effusions* have proved of little value in traumatic tetanus, but of great service in the idiopathic form, particularly in warm climates. *Ice in bladders*, steadily applied along the whole length of the spine, has proved efficient in both the traumatic and idiopathic varieties of the disease.

Hypodermic Injections. The following remedies have been employed hypodermically in tetanus: *Atropia*, without much success; *Liquor opti compositus*, gtt. xxv–lx, by Dr. RUPPNER, with the effect of securing comparative calm and ease; *Morphia*, gr. j–ij during the day, of the muriate, by DEMARQUAY, the needle being carried deeply into the contracted muscles, and, if possible, to the point of entrance of the nerves; *Nicotia*, gr. $\frac{1}{8}$, about one-half of the traumatic cases, according to Prof. BARTHOLOW, treated with it getting well—a better result than from any other remedy excepting physostigma; **Physostigma*, gr. $\frac{1}{4}$ to commence with, which may be considered as one of the most useful remedies yet employed (p. 105); *Woorara*, gr. $\frac{1}{16}$ – $\frac{1}{8}$ – $\frac{1}{4}$, with varying results, but short of the expectations based upon its peculiar physiological action.

Potassa. Counter-irritation, by caustic potassa, over the spinal column, has repeatedly proved of service in traumatic tetanus.

TIC DOULOUREUX.

FRANCIS E. ANSTIE, M. D., LONDON.

In the treatment of this terrible kind of facial neuralgia, to which TROUSSEAU gave the name of *epileptiform*, Dr. A. recommends (*Half-Yearly Compendium of Medical Science*, July, 1869) the following plan in the earlier stages of the malady:—

1. *Counter-irritation*, applied, not to the branches of the fifth, but to those of the occipital nerve, at the nape of the neck. A blister in the former situation is often as hurtful as useful; in the latter, it is sometimes strikingly effective in gaining a short respite.

2. *Nutritive Tonics.* The assiduous use of cod-liver oil, or of some fatty substitute for it, should be insisted on from the first, and is of the highest consequence.

3. *Subcutaneous Injection* of morphia, or of atropia, according to circumstances. Commence with the use of one-sixth of a grain of morphia twice daily, increasing this, if necessary, to one-fourth and one-half a grain, and in rare cases to one grain. If this produces, along with the other measures, a notable remission of the pain, it should be cautiously and steadily decreased, as circumstances may admit. In cases where morphia fails, atropia may be tried in doses commencing at one-sixth of a grain. The injection of a less quantity than this would probably be useless in severe tic.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

210. R. Liquoris potassii arsenitis, gtt.v
Syrupi rhei aromatici, f.ʒj. M.
For one dose, thrice daily, after meals.

At night apply a *hot salt bag* to the back of the neck, and order the following pill:—

211.	R.	Extracti belladonnæ,	gr. ʒ	
		Extracti hyoscyami,		
		Extracti colocynthis compositi,		
		Pulveris zingiberis,	ss	gr. j. M.

ASHLEY N. DENTON, M. D., SUTHERLAND SPRINGS, TEXAS.

212. R. Olei camphoræ, f. 3ij
Pulveris opii, ʒj
Potassii nitratis, gr. xv.

Mix well in a mortar, and apply to a denuded surface. Useful in relieving the intense suffering from facial neuralgia.

Dr. D. also recommends (St. Louis *Medical Reporter*, June 15th, 1867) chloroform, as advised by Dr. TANNER, as one of the most useful palliatives in his hands.

W. MUNRO, M. D., ENGLAND.

Believing that in tic douloureux the blood vessels of the part affected are in a state of constriction, our author has used *calabar bean* in several cases (*Medical and Surgical Reporter*, December 5th, 1874) with exceedingly satisfactory results. He drops into the eye two or three drops of a solution of extract of calabar bean (1 in 40), or applies one of Streatfield's ophthalmic squares to the eye.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

213. R. Extracti hyoseyami,
Zinci oxidī, aa ℥ij. M.
Divide into 40 pills. Begin with one pill, morning and evening, and increase to twenty or thirty of them daily. These, known as Meglin's pills, have a good reputation in Germany.

THOMAS HAWKES TANNER, M. D., LONDON.

214. R. Extracti belladonnæ,
Extracti opii, aa ℥iiss
Glycerinæ, f.℥iv
Extracti papaveris, ℥iiss. M.
To be painted over the affected part. A fomentation, flannel, or hot linseed poultice, is to be applied, being separated from the extracts by a sheet of tissue paper.
215. R. Aconitiæ, gr.ij
Alcoholis, gtt.vj
Mix thoroughly and add
Adipis, ℥j. M.
A small portion to be cautiously smeared over the track of the painful nerve once or twice a day; but it must not be used where there is the slightest abrasion.

EDWARD WAAKES, M. D., LONDON.

216. R. Potassii bicarbonatis, ℥iiss
Extracti ergotæ fluidi, f.℥j
Infusi ergotæ, f.℥vj. M.
Two tablespoonfuls every four hours.

B. M. WALKER, M. D., PLYMOUTH, NORTH CAROLINA.

Our author reports (*American Journal of the Medical Sciences*, April, 1874) a case of tic douloureux treated by ice. The patient, a lady aged 60, had been treated in various ways during five years, no remedy securing a longer period of relief than a few weeks. She was directed to use ice upon the part, which was over the fifth

pair of nerves, and to continue the application as long as she could bear it, at the same time holding brandy in the mouth. The pain, for a while, was more intolerable than ever before; then it began to subside, and perfect quiet was obtained. The pain did not return the next day, as was customary, nor was there any subsequent return nor necessity for treatment.

RÉSUMÉ OF REMEDIES.

Acidum Arseniosum is sometimes prescribed by Prof. DA COSTA (F. 210).

Aconitum is employed with benefit in this, as in most other forms of neuralgia.

Ammonii Chloridum, in doses of \mathfrak{zss} , four times daily, often succeeds. If the pain does not yield after five doses, no benefit need be expected from this remedy.

Aqua Ammoniac has been found of benefit in some cases, in doses of \mathfrak{mxx} -xl in a cupful of thick gruel, at bedtime.

Argenti Nitras has been found, by ROMBERG, of great but not permanent benefit, in doses of gr.j. several times daily.

**Atropia*, hypodermically, is a valuable remedy, in this, as in other forms of neuralgia.

Belladonna ranks among the first of sedatives and anodynes, in this, as in other neuralgic affections (F. 211, 214).

Beberia Sulphas (in doses of gr.x night and morning), has been recommended by Prof. J. Y. SIMPSON and others.

Cannabis Indica is a capricious remedy, but one which ($\mathfrak{m}\mathfrak{xij}$ --xx of the tincture) often allays pain after the failure of other sedatives.

Chloroformum is frequently a useful palliative.

Caffein. One grain doses of the citrate every hour, for some time before the expected paroxysms, has been recommended.

Ergota has been found useful, by Dr. E. WAKES (*British Medical Journal*, August 8, 1868).

Ferrum is of service in anæmic cases.

Hyoscyamus, combined with oxide of zinc, has an excellent reputation in Germany (F. 213).

**Morphia*, hypodermically injected, is a speedy and powerful remedy (p. 110). The injections should not be made under the skin of the face.

Oleum Tigllii has been employed with benefit internally.

Opium is inferior to morphia injected subcutaneously.

Cathartic Enemata of castor oil, turpentine and assafoetida are valuable aids to treatment when there is an overloaded colon.

EXTERNAL REMEDIES.

Aconitia, in purely chronic cases, is a most valuable application (F. 215).

**Aconitum*, locally, often subdues the disease, attention being paid, at the same time, to the state of the bowels, and to the general health.

Antimonial counter-irritation occasions so much pain and discomfort that it is rarely resorted to.

Aqua Ammoniac has been found, by a number of French physicians, to rapidly cure some obstinate cases, when applied with a camel-hair

brush to the palate and gums, so as to cause a profuse discharge of tears and saliva.

Belladonna is frequently employed locally, with benefit (F. 214).

* *Chloroformum* may be applied in liniment or pad.

Counter-Irritation at the nape of the neck is recommended by Dr. ANSTIE (p. 110). Dr. DA COSTA sometimes orders a hot salt bath to the back of the neck.

Delphinia, applied externally, is stated, by Dr. TURNBULL, to be very efficient. It may be employed in the form of a solution :—

217.	R.	Delphinia,	℥ij	
		Alcoholis,	f. 3 iij.	M.

Or, in ointment :—

218.	R.	Delphinia,	gr. xxx	
		Olei olivæ,	f. 3 j	
		Adipis,	3 j.	M.

Frigus. The local application of ice has been successfully employed (p. 111).

Hydrargyri Iodidum Viridum is recommended, in ointment, of the strength of forty grains to the ounce of lard.

Opium is applied locally with benefit, but is far inferior to morphia, introduced hypodermically.

Physostigma. A solution of the extract of calabar bean (1 in 40) applied to the eye, has been used successfully (p. 111).

Veratria is of great service, applied in ointment (F. 150, 157).

Electro-puncture, employed during the intermission of pain, is often a valuable method of treatment.

Hypodermic Injections. Dr. ANSTIE employs injections of morphia or of atropia, according to circumstances (p. 110). Dr. RUFFANER reports a number of cases treated with success by the injection of liquor opii compositus, ℞x. In general, in regard to the use of hypodermic injections, the same is true as in other forms of neuralgia (pp. 95, 104).

Neurotomy. Prof. NIEMEYER quotes BRUNS in support of division of the nerve, or excision of part of it, in proper cases. He shows, after a careful examination of the cases where it had been done, that, after excluding those where its want of benefit depended on error of diagnosis or operation, and after excluding the cases where the recurrence of pain was to be regarded as a new attack, not as a relapse, there was a considerable number of cases where the neurotomy caused either a complete and permanent benefit, or at least a temporary one for a few months or years. The operation is indicated when the pain is very limited, when it is probable that its exciting cause is situated at a point beyond which the nerve is accessible to the knife, when other treatment has proved fruitless, and when the pain renders the patient unfit for business. There is also an indication to operate when we cannot hope to divide the nerve between the point of disease and the brain, but when the pain never occurs spontaneously, being always the result of some external irritation acting on the peripheral terminations of the nerve. In such cases the operation may, to some extent, protect the patients from the exciting causes of their attacks of pain. The temporary *compression* of the affected nerve, and the artery supplying it, has also sometimes proved an excellent palliative, and deserves a trial in suitable cases.

VERTIGO.

PROF. AUSTIN FLINT, M. D., NEW YORK.

The first and most important measure in the treatment of vertigo consists in the removal of the cause or causes at work. All measures, such as blood-letting, counter-irritation and purgation, addressed to cerebral congestion, are hurtful. On the contrary, tonic remedies, nutritious diet, and other hygienic means of invigorating the general health, are useful. The practitioner should bear in mind the importance of assuring the patient positively of the absence of all danger.

C. HANDFIELD JONES, M. D., LONDON.

219. R. Hydrargyri chloridi corrosivi, gr. i
 Glycerinæ, f. ʒi
 Tincturæ cinchonæ compositæ, f. ʒi
 Olei menthæ piperitæ, ℥xxv. M.

A teaspoonful in a wineglassful of water three times a day, in the vertigo of old persons, which occurs sometimes paroxysmally, as a single symptom, unassociated with any special state that can account for it. Dr. THOMAS HAWKES TANNER also recommends this treatment for the attacks of temporary dizziness to which the aged are liable.

RÉSUMÉ OF REMEDIES.

- Ammonii Bromidum* has been found, by Dr. RAMSKILL, of great help, when given in an effervescing form with cascarrilla, in cases of vertigo from overwork in the well-fed, when there is usually restlessness, insomnia, and depression of spirits, with a sense of impending evil.
- Cubeba*, in doses of gr. i, three times a day, at meal times, is recommended by Dr. DEBOUT in vertigo occasioned by excessive mental emotion or intellectual labor, and associated with dyspeptic derangement.
- **Ferri et Strychniæ Citras* is recommended by Dr. RAMSKILL in essential vertigo (i.e., that unaccompanied with any other head symptoms). The patient should be placed on a long course of it, given in an effervescing form, and alternating, month by month, with tincture of larch and small doses of digitalis.
- **Hydrargyri Chloridum Corrosivum* is recommended, in small doses with bark, by Drs. C. HANDFIELD JONES and T. H. TANNER, in the temporary vertigo of old persons (F. 219).
- Potassii Bicarbonas* is very serviceable in dyspeptic vertigo.
- **Potassii Bromidum* is, according to Dr. RUSSELL REYNOLDS, often of service in vertigo, especially in cases which occur paroxysmally, without the co-existence of obvious spasm or organic disease of the brain.
- Tonic remedies are recommended by Prof. AUSTIN FLINT.
- Valeriana* is very serviceable in that form of vertigo, with cardiac palpitation, which is not an unfrequent accompaniment of the menopause, or of the first establishment of the menses, in which the blood seems to rush into the head and then suddenly back upon the heart.
- Zinci Valerianas*, in doses of gr. i-ij, thrice daily, associated with extract of valerian, is recommended by Dr. DELIOUX in the treatment of nervous vertigo.

II. DISEASES OF THE RESPIRATORY SYSTEM.

*Aphonia—Asthma—Bronchitis, Acute—Bronchitis, Chronic—
Catarrh—Coryza—Emphysema—Hæmoptysis—Laryngitis—
Phthisis Pulmonalis—Pleurisy, Acute—Pleurisy, Chronic—
Pneumonia, Acute—Pneumonia, Chronic.*

APHONIA.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

220. R. Ammonii chloridi, $\overline{3ss}$
Syrupi pruni virginianæ, $\overline{f.3ij}$.
A teaspoonful thrice daily, in intermittent aphonia, together with

221. R. Strychniæ sulphatis, $\overline{gr. \frac{1}{16}}$.
In granule, thrice daily.

Used in a case of intermittent aphonia in which the voice was lost for an hour at a time several times a week. A catarrhal condition in this woman, a school teacher, led to a weakening of the cords, so that any over exertion brought about temporary inability to generate distinct voice.

The local application of sulphate of zinc to the cords is productive of permanent good in such cases. The following formulæ may be used for inhalation :—

222. R. Zinci sulphatis, $\overline{gr. j-vj}$
Aquæ destillatæ, $\overline{f.3j}$. M.

223. R. Ferri chloridi, $\overline{gr. j-ij}$
Aquæ destillatæ, $\overline{f.3j}$. M.

As a weak inhalation in hysterical aphonia.

FREDERICK FIEBER, M. D., VIENNA.

224. R. Tincturæ opii, $\overline{gtt. vj}$
Zinci sulphatis, $\overline{gr. vj}$
Aquæ destillatæ, $\overline{f.3j}$. M.

For inhalation.

In laryngo-tracheal catarrh, our author reports a case with

almost complete aphonia, in which the voice soon returned under the inhalation of this solution.

In aphonia from paralysis of the vocal cords, local faradization should be employed.

N. GALLOIS, M. D., PARIS.

225. Immerse a piece of thick paper in a solution of nitrate of potassium, and dry it; then cover it over with the compound tincture of benzoin, cut it up into pieces $3\frac{1}{2}$ by $1\frac{1}{2}$ inches, and make into cigarettes.

These cigarettes are highly praised in aphonia.

PROF. O. REVEIL, M. D., PARIS.

226. R. Pulveris benzoinii, ℥ss.
Place a portion on some live coals, and inhale the vapor, by deep inspirations, in cases of aphonia and hoarseness.

L. WALDENBURG, M. D., BERLIN.

227. R. Sodii chloridi, gr.ij
Aquæ destillatæ, f.℥j. M.

Used with benefit in a case of aphonia in a patient affected with laryngitis and tuberculosis.

RÉSUMÉ OF REMEDIES.

CATARRHAL APHONIA.

Alumen. BENNATI, formerly physician at l'Opéra Italien, Paris, ordered the following prescription to restore the natural tones of the voice:—

228. R. Alumenis, ℥i
Decocti hordei, f.℥ijss. M.

To be used as a *gargle*, the strength to be gradually increased. The general health should be, at the same time, carefully looked after, and the exercise of the voice regulated. The internal administration of alum (gr. x a day, in divided doses, gradually increased to gr. xlv) has been also found very beneficial. Alum lozenges are indicated to complete the cure, and alone, in milder cases.

**Ammonia.* The inhalation of ammoniacal vapor, disengaged from a mixture of a solution of chloride of ammonium and carbonate of potassium, has given excellent results in aphonia in consequence of exposure to cold. The utility of inhalations of chloride of ammonium vapor in these cases has been tested by Dr. BEIGEL in a number of cases (*Practitioner*, Aug., 1868). Dr. DA COSTA sometimes prescribes chloride of ammonium internally (F. 220).

Benzoinum, in vapor, is recommended by French physicians (F. 226).

Chlorinium. Chlorine inhalations are serviceable in aphonia following an ordinary cold, without organic lesion.

Iodinium. Iodine inhalations, and the application of the tincture of iodine to the fore part of the neck, are worthy of trial in cases arising from chronic thickening, or from debility and relaxation.

Opium inhalations have been recommended (F. 224).

Sodii Chloridum has been used in inhalation (F. 227).

Strychnia Sulphas has been prescribed by Dr. DA COSTA in intermittent aphonia, together with chloride of ammonium internally (F. 221).

Zinci Sulphas is of use, either locally applied, in solution, to the cords, or inhaled (F. 222, 224).

Zingiber. A ginger gargle, or a piece of the root employed as a masticatory, is often useful in aphonia from relaxation of the parts.

HYSTERICAL AND NERVOUS APHONIA.

Ether. Some cases have been reported as cured by the inhalation of ether.

Ferri Chloridum, diluted, makes a useful inhalation in hysterical aphonia. (F. 223).

Pyrethrum has been found useful in nervous aphonia.

EXTERNAL REMEDIES.

**Cantharis.* Dr. RUSSELL REYNOLDS mentions an obstinate case of hysterical aphonia which yielded to a strip of blister round the throat.

**Electricity*, according to Dr. G. JOHNSON (*Medical Times*, Jan. 15, 1870), is the best application in nervous and hysterical aphonia. Dr. MORRELL MACKENZIE's "laryngeal galvanizer" should be used. The shock excites spasm and a scream, and the cure is sometimes very rapid.

FUNCTIONAL APHONIA.

Argenti Nitras, in solution, applied to the larynx, has been found very beneficial in functional aphonia arising from paralysis of the vocal cords.

Emetics of ipecacuanha, sulphate of copper, or sulphate of zinc, are beneficial in aphonia arising from an atonic or paralytic state of the larynx, if followed by tonic and stimulant remedies.

Local Faradization is of service.

Inhalations are of service in almost all the forms of aphonia. Among those recommended are: Ammoniacal vapor (p. 116); vapor of benzoin (F. 226); chloride of iron (F. 223); chloride of sodium (F. 227); vapor of chlorine; vapor of iodine; opium (F. 224); sulphate of zinc (F. 222, 224).

Counter-irritation. Many cases of aphonia yield to a local external application, as a blister, a mustard poultice, or camphor liniment, or some other stimulating application.

Tonic Regimen, the fundamental basis of which may be summed up in the three words, "air, exercise, and diet," of the most sanitary kind, is generally, according to Prof. AIRKEN, sufficient to bring about a cure in aphonia. The *shower bath* has often been of service. It must not be forgotten that this disease can be easily feigned.

ASTHMA.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

- | | | | | | |
|------|----|-----------------------------|----|--------|----|
| 229. | R. | Spiritus ætheris compositi, | | | |
| | | Extracti valerianæ fluidi, | ss | f. 3j | |
| | | Tincturæ lobeliæ, | | f. 3ss | |
| | | Potassii chloratis, | | 3i ss | |
| | | Syrupi tolutani, | | f. 3j. | M. |

A dessertspoonful in water three times a day.

Direct also the following stimulating liniment:—

- | | | | | |
|------|----|---------------------|------------|----|
| 230. | R. | Chloroformi, | f. 3 ss | |
| | | Olei terebinthinæ, | f. 3 i | |
| | | Spiritus rosmarini. | f. 3 i ss. | M. |

To be rubbed on the chest several times a day.

- | | | | | | |
|------|----|--------------------|-------|--------|----|
| 231. | R. | Potassii iodidi, | 3ij | | |
| | | Morphiæ sulphatis, | gr. 4 | | |
| | | Tincturæ scillæ, | | | |
| | | Tincturæ lobeliæ, | | | |
| | | Syrupi. | ss | f. 3i. | M. |

A teaspoonful thrice daily, in asthma with emphysema and chronic bronchitis.

232. R. Zinci valerianatis, ðij
Extracti belladonnæ, gr.j. M.

For 20 pills. One thrice daily, in nervous asthma.

In the treatment of the paroxysms of asthma all nauseants have a certain influence in relaxing the bronchial spasm. Lobelia is particularly serviceable because it acts both as a nauseant and expectorant.

233. B. Tinctura lobeliae,
Tinctura hyoscyami,
Spiritus aetheris compositi,
Syrupi tulitani. ss f℥i. M.

A teaspoonful in water every half hour during the paroxysm, until some effect is produced on the breathing, and then every hour or two.

Strong coffee is also sometimes of service in averting a paroxysm (Dr. NIKERKE directs two ounces of mocha to the cup).

The fumes of nitre paper often give relief.

254. Take some ordinary blotting paper, dip it into a concentrated solution of nitrate of potassium, and allow it to dry. When wanted for use, ignite it in an open vessel covered with a newspaper made into a cone, so that the fumes will be inhaled.

In order to prevent the recurrence of the paroxysms, too great care cannot be taken to inquire into the state of all the functions. In perhaps one-half of the cases, asthma is not a disease of the lungs, but a reflected trouble. In cases of stomach origin,

235. R. *Pilulæ hydrargyri*, gr.ij.
At night, to be followed by one-half an ounce of Rochelle salts in the morning. Afterwards direct arsenic combined with gentian or belladonna; as,
236. R. *Liquoris potassii arsenitis*, f.ʒi
Tincturæ gentianæ compositæ, f.ʒiij. M.
A dessertspoonful thrice daily.

M. FAURE, FRANCE.

237. R. *Aquæ ammoniæ*, f.ʒss.
To be placed in a bowl and the vapor inhaled, taking care, however, to close the nostrils. The inhalation is to be continued for fifteen minutes, and to be repeated four times a day.

N. GALLOIS, M. D., PARIS.

238. R. *Extracti opii*, gr. ʒ-iss
Belladonnæ foliæ, ʒj.
Dissolve the extract in a small quantity of water, and then moisten the belladonna leaves with this solution; dry them and roll into cigarettes.

TROUSSEAU substitutes for the belladonna leaves, stramonium leaves.

These cigarettes of opiated belladonna are useful in nervous asthmas and dry coughs.

C. HANDFIELD JONES, M. D., LONDON.

The treatment of asthma is eminently that of a neurosis. It consists first in the removal of all causes of irritation, such as catarrhal inflammation of the bronchi, dyspeptic disorder, unwholesome diet and unsuitable climate, etc., and secondly, in the use of various appropriate tonics and sedatives. *Arsenic* is sometimes of much advantage.

239. R. *Liquoris potassii arsenitis*, ℥iv-v.
For one dose thrice daily, either alone or combined with an ordinary cough mixture.
240. R. *Extracti cannabis indicæ*, gr.v
For 10 pills.

This drug occasionally proves very useful, one pill immediately checking the spasm.

241. R. *Liquoris opii sedativi* (Battley), ℥x.
For one subcutaneous injection into the left front of the chest.

242. R. *Atropiæ sulphatis*, gr. ʒ.
Aquæ, ℥x. M.
For one hypodermic injection in the vicinity of the left vagus nerve.

DR. LECLERC, FRANCE.

243. R. *Extracti belladonnæ*, gr. xv
Myrrhæ pulveris,
Ipecacuanhæ pulveris, ss ʒss. M.
Divide into 36 pills One thrice a day, in nervous asthma. Nitre paper to be burned in the chamber of the patient, and stramonium leaves to be smoked.

J. S. MONELL, M. D., NEW YORK.

Our author recommends (New York *Medical Record*, August 15th, 1866), *forced expiration and inspiration, for the relief of spasmodic asthma.*

He directs that all the air be expired that it is possible for the patient to do, and not to inspire until it is found absolutely necessary. Then carry inspiration to its fullest capacity, and retain with great effort for many seconds. This act of forced expiration, waiting, thorough inspiration, and again waiting, should be continued for some fifteen minutes, when it will be found that the spasm is relieved. It requires great exertion on the part of the patient to perform this act. The first attempt at retaining the inspired air during the asthmatic attack will cause the patient to think he cannot continue it, but perseverance will soon delight him with relief from the spasm.

PROF. FELIX VON NIEMEYER, M. D., TUBINGEN.

Among medicaments especially in repute for the prevention of new paroxysms, and for the radical cure of asthma, *quinine* stands first. The shorter and more regular the intervals of the attack, so much the more is to be expected from this drug. It is unsuitable when the pauses between the seizures are very long or irregular in their occurrence. In such cases we must have recourse to other remedies from the list of the so-called nervines.

As a rule, the metallic nervines are to be preferred before tincture of valerian, assafetida, castor or camphor. The following may be used:—

244. R. *Ferri carbonatis*, ʒj
Syrupi, q. s. M.
For 20 pills. One thrice daily.

245. R. Zinci oxidi, gr.xxv
Syrupi, q. s. M.
For 20 pills. One thrice daily.
246. R. Argenti nitratis, gr.iiij-iv
Confectionis rosæ, q. s. M.
For 24 pills. One thrice daily.

DR. FRIDHAM, BIDEFORD, DEVONSHIRE, ENGLAND.

Our author has been very successful in the treatment of asthmatic cases by means of a *duly regulated diet and sedatives* during the intervals of the paroxysms (*British Medical Journal*, June 5 to December 29, 1860).

The secretions from the bowels are, first of all, to be corrected by the following pill, at bedtime, succeeded by a saline aperient in the morning:—

247. R. Pilulæ aloës cum myrrha, gr.iiij
Pilulæ hydrargyri, gr.j
Extracti taraxaci, gr.ij
Extracti stramonii, gr.ss. M.
For 2 pills.

Or, by giving every alternate night, in the form of a pill,

248. R. Pilulæ hydrargyri, gr.iv
Pulveris ipecacuanhæ, gr.j. M.
For one pill.

And on the following morning,

249. R. Misturæ sennæ compositæ, f.ʒj
Magnesii bicarbonatis, gr.x
Sodii bicarbonatis, gr.vij. M.
For one draught.

During the day small doses of *compound rhubarb powder*, of which the following is the formula (Br. Pharm.):—

250. R. Pulveris rhei radicis, ʒij
Magnesiæ, ʒvj
Pulveris zingiberis, ʒj.
To be mixed thoroughly and passed through a fine sieve. Dose—20-60 grains.

After having thus attended to the general secretions for about ten days, the strict dietary system is to be commenced:

He restricts his patients at first to two ounces of fresh meat, with as much dry bread for dinner, at one P. M., and the same for sup-

per, at seven; allows a cup of tea with cream, and dry bread, in the morning; and for drink, weak brandy or whisky and water, which is not to be taken till three hours after animal food. Rest is also enjoined for the same period, though air and exercise are recommended. The following sedatives are also to be given:—

251. R. Extracti conii, ʒj M.
Extracti cannabis indicæ, gr.v.

For 20 pills. One to be taken four times a day, at the hours of seven, twelve, five, and ten. Gradually the dose of extract of conium is to be increased to gr.v, and that of Indian hemp to gr.j, five times a day.

HYDE SALTER, M. D., LONDON.

252. R. Potassii nitratis, ʒiv M.
Aquæ, Oss.

This solution should be used in the making of nitre paper, for which red blotting paper should be employed.

Coffee relieves about two-thirds of the cases in which it is tried. The relief is very unequal, often merely temporary, sometimes very slight, sometimes complete and permanent. The following are valuable hints on its administration: 1. It cannot be given too strong. Unless sufficiently strong to produce its characteristic physiological effects it does no good, but rather harm; moreover, if given very strong, it need not be given in much bulk, and quantity is a disadvantage, rendering less rapid the effect, and oppressively disturbing the stomach. 2. It is best given without sugar and milk—pure *café noir*. 3. It should be given on an empty stomach; if given on a full stomach it often does great harm, by putting a stop to the process of digestion; indeed, so much is this the case, that coffee accompanying a meal, especially late in the day, is so peculiarly apt to induce asthma that it deserves to be classed among its special provocatives. 4. It seems to act better if given hot—very hot.

Lobelia is given by Dr. S., in the form of the tincture, in repeated doses, every half hour, increasing the dose \mathfrak{m} v each time, till either the physiological effects (faintness, sickness) are manifested, with or without relief, or that relief is obtained without such symptoms. In either case, the medicine is to be at once discontinued. Generally no relief takes place until symptoms of lobelia poisoning show themselves. Any amount may be given, short of producing the effects, without any relief at all. The quantity required differs in each case—generally \mathfrak{m} l–lx suffices; in others f.ʒiss fail to produce an effect. When once the necessary dose has been ascertained in

this way, the patient should start with it on the next occasion, which generally has the desired effect at once.

Iodide of potassium entirely fails in a great many cases. Sometimes, however, the most striking results attend its use. It often requires to be continued for some time before it begins to manifest its effects. It should be used in every case in which it has not been tried, because of its occasional great value.

Quinine is the best of all tonics in asthma; next to it is *iron*. The two may be combined with a mineral acid and given with good results.

Stramonium is, in some cases, the remedy; in the majority of cases, as ordinarily used, it does some good; and in some few it is positively injurious. Its value in any case can only be ascertained by personal experience. When the leaves and stems fail, substituting the seeds may prove effectual. They appear to be more powerful in their action. The inhalation of the smoke, and swallowing the saliva, may be advantageously combined with the ordinary method of smoking. The earlier in a paroxysm it is had recourse to, the more likely will it be to relieve the spasm; over one that has been long established, it has but little power. As the great thing is to give it in time, an asthmatic should keep his pipe already filled, with the means of lighting it by his bedside, so that, on awaking with dyspnoea, he may immediately use it. A good plan is to adopt the habit of smoking a pipe of it the last thing at night, whether a paroxysm is threatened or not. The stramonium seems to leave, for some hours, a state of the nervous system in which the asthma is not likely to come on, and, since the attack is almost always at night, it seems to conduct the patient through the critical time. The *extract* (gr. $\frac{1}{4}$, gradually increased to gr. j) sometimes produces excellent effects, or the *tincture* (m_x-xx every four hours), may be substituted.

Tobacco smoking affords, in some cases, remarkable ease. The habit of smoking has rendered powerless, in a large number of cases, what may, without any qualification, be called its most potent remedy. A pipe is preferable to a cigar, and "bird's eye" to the stronger forms of tobacco. For women and children a few whiffs of a mild cigarette are quite sufficient.

Chloroform inhalations, *short of anaesthesia*, are often of benefit. The following are the conclusions of Dr. S. in regard to this remedy: 1. It holds a high place among the remedies for asthma,

there being probably no agent that relieves in so large a number of cases. 2. It operates with very various completeness in different cases. 3. Where it does not cure, it is of great value by affording a temporary respite. 4. No amount of asthmatic apnoea or dyspnoea is any bar to its use. 5. If given constantly, however, in large doses, for a long period, a state of things arises which constitutes a bar to its continuance. 6. The sooner it is given in a paroxysm the better, for if the spasm has existed for some time it is apt to recur as soon as the influence of the chloroform passes off. A few drops at the first indication of an attack may act as a preventive.

THOMAS HAWKES TANNER, M. D., LONDON.

253. R.	Potassii iodidi,	℥ijss-℥iv	
	Spiritus ammoniæ aromatici,	f.℥j	
	Tincturæ belladonnæ,	℥l-f.℥ijss	
	Tincturæ cinchonæ compositæ,	f.℥ij	
	Aquæ menthæ piperitæ,	f.℥j.	M.

A dessertspoonful, in water, three times a day.

In some cases of asthma the author has found remarkable benefit from this formula. It requires to be persevered with for some weeks, the patient being watched, lest it impoverish the blood and produce purpura or boils, or even a carbuncle. If there be constipation order

254. R.	Pilulæ rhei compositæ,		
	Extracti conii,	ss	gr.v.

For 2 pills. To be taken at bedtime.

PROF. TROUSSEAU, PARIS.

255. R.	Potassii iodidi,	℥ijss	
	Spiritus vini gallici,	f.℥iss	
	Decocti senegæ,	f.℥iij	
	Syrupi papaveris,	f.℥j.	M.

In essential asthma give a tablespoonful, twice a day, an hour before the meals, in a little sweetened water.

During the attack, the tincture of lobelia may be administered, in doses of from twenty to thirty drops, from half-hour to half-hour. The respiration of chloroform is also useful; also stramonium cigarettes.

DR. WISTINGHAUSEN, GERMANY.

256. R.	Liquoris potassii arsenitis,	gtt.x-xv-xx	
	Aquæ destillatæ,	f.℥j.	M.

For inhalation, by means of atomizer, once or twice a day.

RÉSUMÉ OF REMEDIES.

Acetum. As a preventive, bathing the chest every morning with vinegar and water has been advised.

Æther by inhalation is sometimes resorted to with benefit in asthma.

Ammonii Carbonas has proved (in doses of gr. x–xv) more successful than any other remedy, in the hands of Dr. J. HOPE, in cases of asthma arising from, or connected with, *disease of the heart*. In a very obstinate case the following afforded much relief:—

257. R.	Ammonii carbonatis,	gr. viij	
	Antimonii et potassii tartratis,	gr. ʒ	
	Aquæ anisi,	f. ʒ iss.	M.

A draught to be taken every alternate hour.

Ammoniacum is of great service in both *spasmodic* and *hysterical* asthma. In the former case it should be combined with tincture of squill and a small portion of hyoscyamus or conium; in the latter, with equal parts of assafetida. Plasters of ammoniacum applied to the chest often prove useful.

Antimonii et Potassii Tartras. Counter-irritation to the chest by tartar emetic ointment is occasionally useful.

Aqua Ammoniacæ (four parts to one of water), applied to the velum palati has proved of service in simple idiopathic asthma. This application, which may prove dangerous, is only to be made, if at all, with great caution, so as not to touch the back part of the pharynx. The inhalation of the vapor of aquæ ammonia is useful (F. 237).

Argenti Nitras is recommended by Dr. NIEMEYER (F. 246) and others.

Arsenicum is recommended by Dr. HANDFIELD JONES (F. 239) and others, but is inadmissible in organic disease of the lungs and heart (F. 236, 256).

Assafœtida, in combination with other antispasmodics and with narcotics, is often very beneficial in spasmodic asthma.

258. R.	Tincturæ assafœtidæ,	f. ʒss	
	Tincturæ opii,	ʒxx	
	Spiritus ætheris compositi,	f. ʒss	
	Aquæ camphoræ,	f. ʒ iss.	M.

For one draught.

**Belladonna* is a valuable remedy in spasmodic asthma, administered in the manner directed by Dr. HYDE SALTER, viz., in one full dose, sufficiently large to produce the full physiological effects of the drug, every night at bedtime. This plan he regards as infinitely superior to the system of divided doses during the day. It is curative as well as prophylactic, for, by preventing the attack for a series of nights in succession, it breaks through the habit. As there is a marked difference in the tolerance of belladonna in individuals, the proper dose may be ascertained by commencing with small doses and gradually increasing them until the requisite full dose is ascertained.

Atropia is injected hypodermically with excellent results (F. 242).

Brominium, see Potassii Bromidum.

Camphora is recommended by Dr. COPLAND as one of the most generally beneficial of any of the class of narcotics or antispasmodics. In the *nervous* and *spasmodic* forms of asthma it should be given in large doses (gr. iij–x), and combined with musk, castor, assafetida, etc., or with sedatives.

Cannabis Indica is said to occasionally prove very beneficial (F. 240, 251), but in the hands of Dr. HYDE SALTER it has been a complete failure in the few cases in which he employed it.

Castoreum combined with ipecacuanha (equal parts of the tincture of castor and the wine of ipecac), is recommended by Dr. GRAVES.

Chloral has been employed with benefit.

**Caffea* is a simple, safe and very efficacious remedy. Asthmatic patients should avoid using it as an ordinary beverage, lest the habit of taking it should impair its efficacy as a medicine. For its administration see Dr. HYDE SALTER's directions (p. 122).

Chloroformum by inhalation is an excellent and prompt remedy for spasmodic asthma.

Cinchona, see Quiniæ Sulphas.

Conium is sometimes given (F. 251).

Datura Tatula is the new remedy, said to be of great efficacy smoked in cigarettes.

Digitalis has been employed, but is inferior in efficacy and safety to other remedies.

Dracontium sometimes succeeds (in doses of gr. xxx-l of the powdered root during the paroxysm), in obstinate cases of spasmodic asthma.

Ferri Carbonas is recommended by Dr. NIEMEYER (F. 244).

Galbanum is occasionally useful, but is inferior to ammoniacum.

Hyoscyamus is, according to Dr. HARLEY, the appropriate remedy in *cardiac* and *pulmonary* asthma. It is best administered subcutaneously.

Iodinium, see Potassii Iodidum.

**Ipecacuanha*, in full emetic doses (not less than gr. xx), is often effectual in arresting a paroxysm of spasmodic asthma, if given at or near the outset of the attack. Proportionate doses to children may be given with safety and advantage. Small doses of the wine (℥ v) repeated every ten to thirty minutes for two or three hours, unless relief comes much sooner, in which case the dose may be diminished and taken less frequently, is a method of treatment recommended by Dr. C. D. PHILLIPS (*Practitioner*, Nov., 1869), in *nocturnal spasmodic* asthma, when there is no organic disease of the heart or lungs.

**Lobelia*, although, from want of uniformity in its action, and from failure to fulfill the high expectations at one time entertained of it, it has fallen into comparative disuse, is, in cases which tolerate it, a valuable remedy. Dr. HYDE SALTER reports favorably of the tincture (p. 122). Dr. RINGER, while regarding it as a remedy of great efficacy, considers that it should be given with caution where heart disease exists, as the pulse may become irregular and very weak. It should also be remembered that some persons exhibit great intolerance of its action, poisonous effects following the smallest doses, and that different specimens differ considerably in strength. It is sometimes given by Prof. DA COSTA, combined with hyoscyamus and Hoffman's anodyne (F. 229, 231, 233).

Moschus, in doses regulated according to the severity of the attack, is often productive of benefit in *purely spasmodic* or *nervous* asthma. It has also been applied *endermically* (gr.vj-xv) with advantage.

Myrrha is useful in the asthma of old persons, by arresting the exhaustion consequent on profuse expectoration.

Nitrite of Amyl. Cases have been reported in which the inhalation of five drops of this liquid has arrested very distressing attacks of spasmodic asthma.

Opium is of questionable value in asthma. Dr. HYDE SALTER says, "Prefer any other sedative to opium; and unless there is some special complication that indicates it, never give it at all."

Oxygen Inhalations have been tried with reported "wonderful" results in nervous asthma.

Petroleum is a stimulant expectorant, of use in asthma unattended with inflammation.

Potassii Bromidum, in full doses, at night, has been recommended in spasmodic asthma. In the *spasmodic asthma of childhood*, given in syrup, in doses of gr.vj every two hours, it has proved very successful after the failure of other remedies.

Potassii Iodidum is an uncertain remedy, which sometimes, however, proves strikingly successful (F. 253, 255).

Potassii Nitras. The inhalation of the fumes of paper impregnated with nitre is often of striking benefit (F. 234, 252). The following formula is, given in the *Journal de Pharmacie et de Chemie*:—

259. Take four ounces of white paper, and allow it to macerate in warm water, until reduced to a uniform paste. Then press out the greater portion of water and mix the residue in a mortar with the following powder:—

Potassii nitratis,	3ij
Myrrhæ,	
Olibani,	aa 3ijss
Belladonnæ,	
Stramonii,	
Digitalis,	aa gr.x.

When a uniform mass has been formed, roll out into sheets a line or so thick, dry and cut into strips. This paper is said to burn less quickly than the ordinary nitre paper, and to be more effective.

Quinix Sulphas is highly recommended by Dr. NIEMEYER and HYDE SALTER (see pp. 120, 123).

Sanguinaria has been prescribed with good effects.

Scilla. Benefit is sometimes derived from squill, combined with hemlock or henbane. The following formula is often useful:—

260. R. Tincturæ scillæ,	gtt.xv	
Extracti hyoscyami,	gr.ijj	
Acidi nitrici diluti,	℥xxx	
Aquæ,	f.3iss.	M.

For one dose.

Spiritus Ætheris Compositus. Hoffmann's anodyne, though favorably spoken of by some writers, has proved entirely useless in the hands of Dr. HYDE SALTER, and in some cases has seemed to increase the spasm (F. 229, 233, 258).

**Stramonium*, smoked in a pipe, in doses of gr.x to gr.xx, is often of very great service, but not uniformly so. If it produce any ill effects it should be at once discontinued. The extract or the tincture may be given internally (p. 123).

Sulphur, in doses of about gr.viij daily, to be given while fasting, and persevered in for a long period, has been recommended by French physicians.

Tabacum. The palliative effects of tobacco fumes in nervous asthma are well known (p. 123).

Veratrum Viride has been advised in nervous asthma.

Zinci Oxidum is strongly recommended by Dr. SYMONDS (*British Medical Journal*, June 13th, 1868), who states that whether for abating the morbid susceptibility of the respiratory nerves, which engenders the spasmodic paroxysms, or for diminishing the liability to catarrhs, he knows nothing to surpass long courses of the oxide of zinc, with or without extract of conium, for the one indication, and quinine for the other. It is also recommended by Dr. NIEMEYER (F. 245).

Zinci Sulphas has been employed, with the result of diminishing the frequency and force of the attacks.

Zinci Valerianas is sometimes prescribed (F. 232).

Cathartics are often of service (F. 235, 247, 248, 249, 254).

**Cold Bathing*, employed in the intervals of the attacks of spasmodic asthma, is stated to lessen the morbid sensibility to the impression of cold atmospheric changes, and to give tone and vigor to the system. Simply *sponging the body* is preferred by some to immersion; salt (℥j ad. aquam, ℥j) may be added, and a rough towel or flesh brush employed. The best time is immediately after getting out of bed in the morning. The *shower-bath* is preferred by Sir. T. WATSON.

EXTERNAL REMEDIES.

Electricity has been employed in some cases, but Dr. HYDE SALTER condemns altogether its use.

Hypodermic Injections are frequently employed with great advantage. The following are the principal drugs which have been thus administered:—*Atropia* (F. 242); *Hyoscyamus* (Dr. HARLEY says that in cardiac and pulmonary asthma, the injection of gr. $\frac{1}{4}$ of sulphate of hyoscyamia will often bring immediate relief); *Opium* (F. 241).

Inhalations are of great benefit. The following are the principal drugs which have been thus administered:—*Aqua Ammoniac* (F. 237); *Arsenicum* (F. 256); **Chloroform* (p. 123); *Conium*; *Nitro-muriaticum Acidum Dilutum* (℥j ad. aquam f.℥iv at 150° F., but should be used with great caution during a paroxysm); *Oxygen* (not to be employed when there is heart disease); **Potassii Nitras Fumes* (F. 234, 252, 259); **Stramonium Smoke* (p. 123); *Sulphurous Acid Spray*; **Tobacco Smoke* (p. 123).

Forced Inhalation and Expiration has been recommended (p. 120).

Issues at the nape of the neck are sometimes effectual in mitigating the symptoms.

Local Applications to the Chest are often of service. For this purpose the following may be employed:—*Chloroform and Turpentine Liniments* (F. 230); *Tincture of Iodine*; *Ointment of Iodide of Potassium*; *Tartar Emetic Ointment*; *Hot Turpentine Stupes* (especially useful in the old and debilitated); *Hot Water Stupes* (flannel wrung out of water as hot as can be borne, applied to the whole chest during the fit, is recommended by Dr. GRAVES).

Hay Asthma, see Hay Fever.

ACUTE BRONCHITIS.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

When the symptoms of a "common cold" first express themselves, and even when the trouble has extended to the chest, as indicated by the hoarseness and tendency to cough, the disease may at once be subdued in a healthy person by a full stimulant but not narcotic dose of opium or morphia, *i. e.*,

- | | |
|--------------------------------------|--------|
| 261. R. Pulveris opii, | gr.j |
| vel | |
| 262. R. Liquoris morphiae sulphatis, | f.ʒij. |
| For one dose, at bedtime. | |

Or by five grains of carbonate of ammonium; or by ten to twenty grains of chloride of ammonium; or by an alcoholic diaphoretic drink; or, if the appetite is unimpaired, by a full supper, followed by a moderate amount of some alcoholic stimulant.

If such remedies are delayed too long, the object to be aimed at most is to induce a copious perspiration, and a continued action of the skin and kidneys. From the frequent *inhalation of steam* great benefit is derived.

If the disease shows a disposition to pass into the chronic stage, the following may be administered, and will generally facilitate expectoration and relieve the dyspnoea, viz:—

- | | | |
|------------------------------|----------|----|
| 263. R. Ammonii carbonatis, | gr.v | |
| Tincturæ benzoini compositæ, | f.ʒss | |
| Tincturæ cinchonæ compositæ, | f.ʒiiss. | M. |
| For one dose. | | |

JAMES COPLAND, M. D., LONDON.

- | | | |
|------------------------------------|---------------|----|
| 264. R. Liquoris ammonii acetatis, | f.ʒj | |
| Spiritus ætheris nitrosi, | f.ʒiij | |
| Vini antimonii, | f.ʒiʒss | |
| Misturæ amygdalæ, | ad. f.ʒviiij. | M. |

One or two tablespoonfuls every third or fourth hour, in the treatment of primary or simple bronchitis.

The bowels should be moderately opened by a small dose of calomel or blue pill, with antimonial powder at night, and a gentle aperient in the morning. If the patient be aged, delicate, or vitally depressed, the antimony may be omitted from the prescription, and a portion of the infusion of cinchona, or of the decoction

of senega added. The dose of the antimony may, of course, be increased, if indicated. When the fever is considerable, or the patient complains of soreness or pain in the chest, a mustard poultice may be applied over the sternum, or the following terebinthinate embrocation employed:—

265. R. Linimenti saponis,
 Linimenti terebinthinæ, aa f.ʒiiss
 Olei olivæ, f.ʒvij
 Olei cajuputi, f.ʒj. M.

This embrocation, having been well shaken, should be sprinkled on two or three folds of flannel, or on spongeo-piline, and placed either over the thorax or between the shoulders.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

266. R. Vini ipecacuanhæ, f.ʒij
 Liquoris potassii citratis, f.ʒiv
 Tincturæ opii camphoratæ,
 Syrupi acaciæ, aa f.ʒj. M.

A tablespoonful thrice daily, in the first stage of ordinary acute bronchitis.

267. R. Morphine acetatis, gr.ʒ
 Potassii acetatis, ʒij
 Liquoris ammonii acetatis, f.ʒiij
 Syrupi tolutani, f.ʒj. M.

A dessertspoonful every third hour. A useful diaphoretic alkaline mixture.

268. R. Ammonii carbonatis, gr.xvj
 Spiritus ætheris compositi, f.ʒiiss
 Syrupi tolutani,
 Aquæ, aa f.ʒj. M.

A teaspoonful every two hours; a stimulating expectorant for a child a year old, affected with bronchitis of two weeks' standing.

Counter-irritation to be applied to the chest by means of weak mustard plasters (one part of mustard to four of Indian meal). Also, if the child be much debilitated, 15 gtt. of brandy every four hours. When the child is seen frequently, so that the effect may be watched, there is no better treatment than relieving the lung mechanically by emetics. Hoffman's anodyne, in the above recipe, acts as a diaphoretic and quieting agent, which latter influence would not be obtained from sweet spirits of nitre.

PROF. A. P. DUTCHER, M. D., CLEVELAND, OHIO.

If the patient be robust, and the attack very acute, attended with a frequent and hard pulse, hot and dry skin, costive bowels, laborious breathing, and a troublesome, dry cough, our author recom-

mends (*Philadelphia Medical and Surgical Reporter*, August 17th, 1867) the taking of twelve or fifteen ounces of blood from the arm. If bleeding has no influence in curing the disease, the wonderful power it has in mitigating the patient's sufferings places it far beyond every other known therapeutical agent.

After the bleeding, if the skin remains hot and dry, the patient may be treated to the alcoholic fumigating bath and one of the following powders, given every four hours until the bowels are freely moved:—

269. R.	Podophyllin,	gr. j	
	Hydrargyri chloridi mitis,	ʒj	
	Potassii nitratis,	ʒss	
	Pulveris ipecacuanhæ,	gr. viij.	M.

For 4 powders.

If, after the bowels have been freely moved, the skin should remain hot and dry, the patient may again be subjected to the fumigating bath, and a teaspoonful of the following mixture administered every two hours, until free perspiration and expectoration are produced:—

270. R.	Tincturæ veratri viridi,	f. ʒss	
	Syrupi scillæ compositi,	f. ʒiij	
	Spiritus ætheris nitrosi,	f. ʒss	
	Extracti lobeliæ fluidi,	f. ʒiij	
	Tincturæ opii camphoratæ,	f. ʒss.	M.

A teaspoonful every two hours.

If this should produce nausea or vomiting after a few doses, it will commonly prove very beneficial. After free expectoration has been produced, it may be given at longer intervals, or superseded by the following:—

271. R.	Tincturæ sanguinariæ,	f. ʒiij	
	Vini ipecacuanhæ,	f. ʒj	
	Morphiæ sulphatis,	gr. ij	
	Syrupi,	f. ʒj.	M.

A teaspoonful every six hours.

To relieve cough and produce rest at night, give the patient eight or ten grains of Dover's powder early in the evening.

If the disease still proves obstinate, and if the dyspnoea and cough still continue, the patient complaining of great weight upon the chest, with a deep, burning pain just under the sternum, apply a *blister* immediately over the seat of the difficulty. It will almost invariably relieve all the symptoms, cut the disease short, and secure a safe and speedy convalescence.

Repeated sinapisms on the sternal region.

PROF. R. J. GRAVES, M. D., DUBLIN.

277. R. Acidi nitro-muriatici, f.ʒj
Spiritus terebinthinæ, f.ʒij
Adipis, ʒj. M.

Mix thoroughly, with an ivory spatula, the acid and lard, and then add the spirits of turpentine.

This liniment, which ought to be prepared only in a small quantity at a time, as it alters easily, is to be employed in frictions on the chest, in acute bronchitis.

278. R. Acidi acetici, f.ʒss
Spiritus terebinthinæ, f.ʒijj
Aquæ rosæ, f.ʒiss
Spiritus limonis, gtt.x
Ovi vitelli, q. s. to suspend
the turpentine.

To be applied to the chest by means of a sponge.

This liniment reddens the skin, and after several frictions causes an eruption of fine pustules. A useful rubefacient in bronchitis.

DR. HEIM, GERMANY.

279. R. Ipecacuanhæ pulveris, aa gr. iv
Digitalis pulveris, gr. iss
Extracti opii, gr. xv
Extracti hyoscyami, q. s.
Althææ pulveris,

Divide into 20 pills. One every third hour, to calm the cough of acute bronchitis.

Warm drinks to provoke an abundant transpiration.

280. R. Confectionis rosæ aa ʒiss.
Mellis, gr. xxiv
Tragacanthæ, gr. vj
Pulveris ipecacuanhæ, f.ʒijj. M.
Syrupi tolutani,

A teaspoonful three or four times a day.

PROF. GEORGE JOHNSON, M. D., LONDON.

Acute bronchitis is an exaggerated catarrh; the two diseases are essentially the same, and they require the same principle of treatment, only modified according to the character of the symptoms (*British Medical Journal*, Oct. 23, 1869).

In the early stage of acute bronchitis, when the mucous membrane is dry and swollen, the hot-air bath or the wet packing may

be employed once or oftener with advantage. Another very useful remedy in this stage is tartar emetic, in doses of one-sixth of a grain, combined with liquor ammonii acetatis :—

281. R.	Antimonii et potassii tartratis,	gr. j½	
	Liquoris ammonii acetatis,	f. 3ij	
	Syrupi tolutani,		
	Aquæ,	aa	f. 3j. M.

A tablespoonful thrice daily. The inhalation of steam, repeated several times in the course of the day, is often very soothing and beneficial. Venesection is very rarely required.

In the second stage, when free secretion has been established, antimony and acetate of ammonium are to be discontinued. At this period a combination of carbonate of ammonium, with spirit of chloroform, is useful as a stimulating expectorant or antispasmodic.

282. R.	Ammonii carbonatis,	ʒi ss	
	Spiritus chloroformi,	f. ʒv	
	Syrupi acaciæ,	f. 3ij	
	Aquam,	ad. f. 3iv.	M.

A dessertspoonful thrice daily.

Brandy or wine in moderate quantities may now also be required to sustain the strength. When in the advanced stage there is a profuse secretion, with copious perspiration, the ammonia mixture may be replaced by the following :—

283. R.	Quinæ sulphatis,	gr. xvj	
	Zinci sulphatis,	ʒj	
	Acidi sulphurici aromatici,	f. ʒv	
	Aquæ menthæ piperitæ,	f. 3iijss.	M.

A dessertspoonful thrice daily, in water.

This combination often checks very rapidly the excessive secretion from the bronchial mucous membrane. The *stimulating expectorants* are sometimes useful at this stage of the disease—senega, squill, ammoniac, and the compound tincture of benzoin. If, as sometimes happens, the stimulating expectorants suddenly check secretion, tighten the breath, and increase dyspnoea, their employment must at once be discontinued. When the secretions accumulate and threaten suffocation, the patient being blue, and cold, and drowsy; and the cough nearly or quite ceasing, an emetic of sulphate of zinc is often wonderfully efficacious in clearing the air-passages.

Our author gives an especial warning with regard to *opium*. Never order an opiate for a bronchitic patient who has the slightest blueness of the lips.

THOMAS HAWKES TANNER, M. D., LONDON.

The patient should be confined to bed in a room of the temperature of from 65° to 70° (F.), with the air kept moist. Beef-tea, milk, arrow-root or gruel, tea with milk, and a mucilaginous drink ought to be allowed, such as

284. R. Misturæ acaciæ,
Misturæ amygdalæ, ℞ Oss.

To be mixed with half a pint of pure milk and sweetened with sugar-candy or honey. Then add one large tablespoonful of any liquor. Allow the whole to be taken during the day.

Or,

285. Boil a large pinch of isinglass with a tumblerful of milk, half a dozen bruised almonds, and two or three lumps of sugar. To be taken warm once or twice in the day.

If there be indications of debility, white wine whey, made according to the following formula, will prove a good restorative :—

286. To half a pint of boiling milk add one or two wineglassfuls of Sherry or Madeira. Separate the curd by straining through a fine sieve or piece of muslin. Sweeten the whey with refined sugar.

The following is a useful and agreeable demulcent drink :—

287. R. Extracti sarsaparillæ fluidi,
Syrupi scillæ, ℞ f. ʒiss. M.

A teaspoonful in a teacupful of barley-water, to be frequently taken during the day.

Then, after a brisk purgative, either of the following may be administered :—

288. R. Syrupi scillæ, f. ʒvj
Spiritus ætheris nitrosi,
Tincturæ hyoscyami, ℞ f. ʒiij
Infusi rosæ compositi, f. ʒiss. M.

A tablespoonful every six hours.

289. R. Potassii nitratis, ʒij
Vini antimonii, f. ʒj
Liquoris ammonii acetatis, f. ʒes
Aquam camphoræ, ad. f. ʒiij. M.

A tablespoonful every four hours.

If there be any depression, stimulating expectorants, such as the following, must be ordered:—

290. R.	Ammonii carbonatis,	3ss	
	Spiritus ætheris compositi,	f.3iij	
	Tincturæ scillæ,	f.3iss	
	Tincturæ opii camphoratæ,	f.3ij-iv	
	Tincturæ lavendulæ compositæ,	f.3vj	
	Infusum senegæ,	ad. f.3viij.	N.

Two tablespoonfuls every four hours.

291. R.	Spiritus ammoniæ aromatici,	f.3ss	
	Spiritus chloroformi,	f.3iij	
	Tincturæ aconiti,	f.3ss	
	Tincturæ senegæ,	f.3vj	
	Aquam camphoræ,	ad. f.3iij.	M.

A tablespoonful every six hours.

Gentle *counter-irritation* to the front of the chest, by dry cupping, turpentine stupes or sinapisms, will prove useful. Should the phlegm appear to accumulate in the bronchial tubes the following emetic will readily remove it:—

292. R.	Antimonii et potassii tartratis,	gr. j-ij	
	Vini ipecacuanhæ,	f.3ij.	M.

For one dose, to be added to a wineglassful of water, and its action aided by the free administration of warm water.

For the treatment of Acute Bronchitis in Children, see the section on Diseases of Children.

RÉSUMÉ OF REMEDIES.

Ammonii Acetatis Liquor makes a useful diaphoretic alkaline vehicle for antimony, morphia, etc., (F. 267, 289).

Ammonii Carbonas may be given with benefit, combined with ipecacuanha, squills when expectoration is scanty or difficult, or with tincture of lobelia, if much spasm be present. Five grains given at bedtime, when the first symptoms of a common cold express themselves, often at once subdues the disease (F. 263, 268, 282, 290).

Ammonii Bromidum has been recommended (F. 274).

* *Antimonii et Potassii Tartras* is of service in small doses (gr. $\frac{1}{8}$ – $\frac{1}{4}$) in the earliest stages of acute bronchitis in young, plethoric subjects, and where much febrile action is present (F. 264, 289). When the phlegm accumulates in the bronchial tubes, an antimonial emetic will readily remove it (F. 292). The nauseating and depressing effects of antimony should not, however, be long kept up in this disease, as they interfere with proper nutrition, which is of much importance in these cases.

Chloroformum by inhalation is said to palliate the cough and excitement, and directly favor the resolution of the extravasated fibrin, and prevent the deposit of more. A drachm of chloroform should be inhaled in

the course of fifteen or twenty minutes, and the inhalation repeated from two to twelve times in the twenty-four hours.

Colchicum is recommended in acute stages of *gouty bronchitis* by Dr. GREENHOW, who gives the following, with great success :—

293. R.	Potassii iodidi,		
	Ammonii carbonatis,	ss	gr. iv
	Vini colchici,		℥x
	Tincturæ scillæ,		
	Tincturæ hyoscyami,	ss	℥xx
	Aquæ camphoræ,		q. s.

Make a draught, to be taken thrice daily.

**Ipecacuanha* is a valuable expectorant and diaphoretic, and a useful adjunct to other remedies of the same class (F. 266, 271, 273, 276, 279, 280, 292).

Linum. Flaxseed tea is a favorite vehicle for mild expectorant remedies.

Monarda. The warm infusion of horsemint makes an excellent diaphoretic.

Oleum Ricini seems, more than any other medicine of its class, to mitigate the inflammation and promote resolution by expectoration.

Opium, or morphia, given in full dose at the very outset of a common cold, often averts the attack (F. 261, 262, 266, 272, 276, 279, 290). But an opiate should never be given to a bronchitic patient with the slightest blueness of the lips.

Oxygen. In the dyspnoea of capillary bronchitis, the inhalation of oxygen affords relief, and has been the means of preserving life.

Podophyllin has been used with good results (F. 271).

Potassii Nitras is frequently administered (F. 271, 289). Dr. GRAVES speaks highly of the following combination :—

294. R.	Potassii nitratis,	3ij
	Antimonii et potassii tartratis,	gr. j
	Tincturæ opii camphoratæ	f. ʒss
	Misturæ amygdalæ,	f. ʒxij.

A tablespoonful every hour.

Senega in decoction is a valuable remedy in the treatment of acute bronchitis in the aged (F. 275, 276, 290).

Veratrum Viride is often of service (F. 270).

Zinci Sulphas is useful in the advanced stages, when there is profuse secretion (F. 283).

Blisters are hurtful in the earlier stages, but are often of service in the advanced stages of the disease (p. 131).

Blood-letting is recommended by Prof. DUTCHER, in very acute attacks, in robust patients (p. 131). The application of a few leeches to the chest, or moderate wet-cupping, is sometimes indicated.

Counter-Irritants to the chest are often of service. For this purpose, dry-cupping, *hot turpentine stupes, or mild sinapisms, may be employed (pp. 130, 136, F. 277, 278). Turpentine embrocations are also serviceable (F. 265).

Demulcents are always indicated (F. 284, 285, 286, 287).

Stimulants are often useful, and sometimes necessary, as in the *bronchitis of the aged*, attended with profuse secretion, threatened apnoea and a weak pulse. At the very outset of a common cold, a full supper, with a moderate alcoholic stimulant, will frequently abort the attack (p. 129).

Water. The vapor of hot water is often of signal benefit (p. 129). Wet packing is also of service in the early stages (p. 134).

300. R. Potassii acetatis, ʒss
 Aceti scillæ,
 Spiritus ætheris nitrosi, aa f.ʒvj
 Tincturæ opii camphoratæ, f.ʒss
 Liquoris ammonii acetatis, f.ʒiiijss
 Syrupi aurantii corticis, f.ʒvj. M.
 A tablespoonful thrice daily.

DR. BEIGEL, LONDON.

301. R. Pulveris alumenis, gr.ij
 Tincturæ opii, m̄x
 Aquæ destillatæ, f.ʒj. M.
 For inhalation by means of atomizer, night and morning, in obstinate cases of chronic bronchitis.

The following inhalation also affords relief in severe cases :—

302. R. Acidi tannici, gr.iiij
 Extracti hyoscyami, gr.ij
 Aquæ destillatæ, f.ʒj. M.
 To be inhaled night and morning. On account of the taste, sulphate of iron (gr.iv to f.ʒj.) may be substituted for the tannic acid.

J. SOLIS COHEN, M. D., PHILADELPHIA.

303. R. Liquoris iodinii compositi, gtt.x-xl
 Aquæ destillatæ, f.ʒj. M.
 For inhalation by means of atomizer two or three times a day. If there co-exists pain, the narcotics and sedatives may be added to the inhalation, but preferably in minute quantity.

DR. VAN DER CORPUT.

304. R. Morphisæ muriatis, gr.j
 Ammoniaci, ʒss
 Extracti scillæ, gr.xv-xxv. M.
 For 20 pills—take from two to four in the course of the day, in chronic bronchitis and bronchorrhœa.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

305. R. Ammonii chloridi, ʒij
 Misturæ glycyrrhizæ compositæ, f.ʒiiij. M.
 A dessertspoonful three times a day.

Chloride of ammonium, in order to be effective, should be given in ten-grain doses. In the bronchitis of patients affected with phthisis, it may be combined as follows :—

306. R. Ammonii chloridi, ʒss
 Morphisæ muriatis, gr.j
 Extracti pruni virginianæ fluidi, f.ʒiiij. M.
 A teaspoonful three or four times a day.

307. R. Ammonii chloridi, 3ij
 Potassii chloratis, 3i
 Tincturæ hyoscyami, f.ʒss
 Extracti pruni virginianæ fluidi, f.ʒijss. M.
 A dessertspoonful, thrice daily, when there is a tenacious secretion.

Chlorate of potash thins the secretion and promotes expectoration; it is useful in both acute and chronic bronchitis.

308. R. Potassii chloratis, 3ij
 Tincturæ scillæ, f.ʒss
 Misturæ glycyrrhizæ compositæ, f.ʒijss. M.
 A dessertspoonful three or four times a day, when there are dry râles.

309. R. Vini picis liquidæ, f.ʒij.
 A dessertspoonful thrice daily, in cases of bronchial catarrh, together with

310. R. Plumbi acetatis, ʒij
 Extracti glycyrrhizæ, q. s. M.
 For 20 pills. One three times a day.

311. R. Potassii carbonatis, ʒss
 Vini ipecacuanhæ, f.ʒij
 Tincturæ opii camphoratæ, ss f.ʒiss. M.
 Syrupi tolutani, ss f.ʒiss. M.
 A teaspoonful three times a day, as an alkaline expectorant mixture, to thin the secretion.

Or, the following may be used when a tonic is also indicated:—

312. R. Sodii carbonatis, ʒj
 Ammonii chloridi, 3ij
 Extracti gentianæ fluidi, f.ʒvj
 Extracti hyoscyami fluidi, f.ʒij
 Syrupi tolutani, f.ʒij. M.
 A dessertspoonful three times a day.

313. R. Pulveris alumenis, gr.viii
 Extracti conii fluidi, gtt vj
 Aquæ destillatæ, f.ʒj. M.
 For atomization. The alum to be gradually increased to gr.xx-f.ʒj.

PROF. A. P. DUTCHER, M. D., CLEVELAND, OHIO.

As *local remedies* the inhalation of the vapor of hops, iodine, chloroform, tar, extract of conium and belladonna are at times very useful (*Philadelphia Medical and Surgical Reporter*, October 12th and 19th, 1867). The *vapor of iodine* should be watched with the greatest attention. If it increases dyspnoea, and produces an unusual feeling of heat and distress in the bronchial region, it should be immediately discontinued, for it will produce congestion

in the smaller bronchia, which may extend to the air cells and ultimately end in pneumonia.

The *constitutional treatment* must vary with the wants of each particular case. *Tonics*, such as iron, gentian and quinine, with minute doses of mercury, are commonly useful to improve the state of the secretions and functions generally. When the expectoration is profuse, with much febrile excitement, the *mineral acids* and *metallic astringents* are useful. When the urine is loaded with the oxalate of lime, and the bronchial trouble appears to depend upon indigestion, from some defect in the functions of primary assimilation, the nitro-muriatic acid, administered according to the following formula, will sometimes produce a wonderful change for the better, in cases that have resisted every other form of medication :—

314. R.	Acidi nitrici,	f℥j	
	Acidi muriatici,	f℥ij	
	Morphiæ sulphatis,	gr.ij	
	Tincturæ cinchonæ compositæ,	f℥iv.	M.

A teaspoonful thrice daily, before each meal.

In mild cases of chronic bronchitis, the *iodide of potassium* is a most valuable remedy; it seems to restrain low degrees of inflammation affecting the fibrous part of the tubes, and counteracts the process of induration to which they tend. In bad cases of the disease, where there is no tendency to tuberculosis, our author is in the habit of prescribing the iodide of potash and corrosive chloride of mercury, thus :—

315. R.	Hydrargyri chloridi corrosivi,	gr.ij	
	Potassii iodidi,	℥ij	
	Extracti lobeliæ fluidi,	f℥j	
	Syrupi,	f℥v.	M.

A teaspoonful three times a day, after each meal.

Where there is a tendency to tuberculosis the mercury should be omitted.

The following is a useful combination, where it can be borne by the stomach, to allay cough and restrain expectoration :—

316. R.	Copaibæ,	f℥ij	
	Tincturæ cubebæ,	f℥j	
	Morphiæ sulphatis,	gr. iv	
	Syrupi,	f℥j.	M.

A teaspoonful three times a day.

Ipecacuanha as an expectorant, in ordinary cases of chronic

bronchitis, may be given in doses of a grain or two of the powder, or twenty to thirty drops of the wine, repeated several times a day, or combined with other agents, according to the following:—

317. R. Vini ipecacuanhæ,
 Syrupi scillæ, aa f. ʒj
 Tincturæ digitalis,
 Spiritus ætheris nitrosi, aa f. ʒss
 Tincturæ opii camphoratæ, f. ʒij M.

A teaspoonful three times a day.

In the chronic bronchitis of aged people, where, from alterations in the structure of the tubes, a cure cannot be expected, the disease may often be palliated and the patient rendered very comfortable by the use of the following combination, which is one of our author's favorite prescriptions:—

318. R. Potassii ferrocyanidi, ʒiv
 Morphine sulphatis, gr. v
 Tincturæ colchici radices,
 Syrupi scillæ, aa f. ʒss
 Aquæ destillatæ, f. ʒiv. M.

A teaspoonful three or four times a day.

When expectoration is viscid, alkalies are useful; and when the vital powers are feeble, Dr. D. is in the habit of prescribing, in connection with other treatment, the following:—

319. R. Ferri pyrophosphatis,
 Quinise sulphatis, aa ʒj
 Strychniæ, gr. j
 Extracti hyoscyami, gr. xxx. M.

For 60 pills. Two to be taken three or four times a day, after each meal.

320. R. Potassii iodidi, ʒiij
 Hydrargyri chloridi corrosivi, gr. ij
 Extracti lobeliæ fluidi, f. ʒj
 Syrupi stillingie compositi,
 Syrupi phellandrii aquatici compositi, aa f. ʒviijss. M.

One-half an ounce, three times a day, before each meal; and the chest over the bronchial regions to be painted most thoroughly every night on retiring to rest, with

321. R. Iodinii, ʒj
 Potassii iodidi, ʒij
 Aquæ, f. ʒiv. M.

322. R. Iodinii, gr. xx
 Chloroformi, f. ʒj. M.

40 drops to be inhaled every night, before going to bed. After which, to quiet cough and secure good rest at night, take one of the following:—

- | | | | | |
|---------------|---------------------|----|---------|----|
| 323. R. | Quinise sulphatis, | | | |
| | Extracti hyocyami, | ss | 3ss | |
| | Morphise sulphatis, | | gr.ijj. | M. |
| Fer 20 pills. | | | | |

FREDERICK FIEBER, M. D., VIENNA.

324. R. Zinci sulphatis, gr. v
Aquæ destillatæ, f. ʒj. M.
For inhalation.

Of marked benefit in a case of chronic bronchitis, of the variety simulating consumption, of twenty-five years' standing.

E. HEADLAM GREENHOW, M. D., LONDON.

- | | | | | |
|---------|-------------------------------|-----|--------|----|
| 325. R. | Vini ipecacuanhæ, | | | |
| | Acidi nitro-muriatici diluti, | ss | ℥x | |
| | Tincturæ hyoscyami, | | ℥xx | |
| | Tincturæ gentianæ compositæ, | | f.3ss | |
| | Aquam, | ad. | f.3ij. | M. |

For one dose. To be taken in water three times a day, in chronic bronchitis.

In almost all cases of chronic bronchitis a time arrives when expectorants, cease to be useful. The expectoration has become of the nature of an habitual flow from the bronchial membrane. Treatment of a tonic character is then required. In these cases Dr. GREENHOW has long been accustomed to prescribe with great advantage the *mineral acids*, especially the nitro-muriatic, in combination with a vegetable bitter, as above. In chronic cases attended by very copious expectoration, he adds to each dose of the above mixture twenty minims of the *tincture of larch*, which has the effect not only of lessening the expectoration, and with it the cough and dyspnoea, but also apparently of restoring the debilitated membrane to a more healthy tone, and of rendering patients less liable to catarrhal attacks at every change of the weather or season.

JOHN FORSYTH MEIGS, M. D., PHILADELPHIA.

326. R. Acidi carbolici fluidi, ℥x-xv
Aque, Oss. M.

To be placed in an ordinary inhaling bottle, and used three or four times a day, in bronchial catarrh, offensive secretion from the bronchial tubes, etc.

L. PARISEL OF PARIS.

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|---------|--------------------------|----|-------|----|
| 327. R. | Pulveris cinchonæ flavæ, | ss | ℥ss | |
| | Sulphuris loti, | | q. s. | M. |
| | Syrupi althææ, | | | |

This solution should be inhaled by means of an atomizer; useful both in the simple form of chronic bronchitis and in that which usually complicates the advanced stages of phthisis. It diminishes the secretion and thereby lessens the waste of substance and the exhaustion occasioned by repeated and urgent coughing.

PROF. ALFRED STILLÉ, M. D., PHILADELPHIA.

328. R. Acidi carbolici fluidi, gtt. xv-xx
Tincturæ conii, f. ʒj-ij
Aquæ destillatæ, Oij. M.
For inhalation.

THOMAS HAWKES TANNER, M. D., LONDON.

329. R. Syrupi scillæ, f. ʒvj
Acidi nitrici diluti, f. ʒj
Tincturæ hyoscyami, f. ʒij
Spiritus chloroformi, f. ʒvj
Infusum cinchonæ flavæ, ad. f. ʒvj. M.
Two tablespoonfuls twice or thrice daily, in chronic catarrh, with debility and restlessness.
330. R. Syrupi scillæ, f. ʒvj
Spiritus ammoniæ aromatici, f. ʒij
Morphiæ muriatis, gr. ss
Infusum serpentariæ, ad. f. ʒvj. M.
Two tablespoonfuls two or three times a day, in chronic catarrh.
331. R. Pilulæ scillæ compositæ,
Extracti conii, aa ʒss. M.
For 12 pills. Two to be taken every night at bedtime.

In chronic catarrh when opium is objectionable.

332. R. Tincturæ scillæ, f. ʒij
Tincturæ stramonii, f. ʒi ss
Infusum dulcamaræ, ad. f. ʒvj. M.
Two tablespoonfuls thrice daily.

In chronic catarrh, especially when the secretions of the skin and kidneys are deficient.

333. R. Olei terebinthinæ, f. ʒj
Aquæ calidæ, f. ʒv. M.

In chronic bronchitis with excessive secretion.

334. R. Creasoti, m xxx
Aquæ bullientis, f. ʒviij. M.

In chronic catarrh.

JAMES TURNBULL, M. D., LIVERPOOL.

335. R. Ipecacuanhæ, ʒij
Olei olivæ, f. ʒij
Adipis, ʒss. M.

This pomade is to be spread upon the skin once or twice a day, when it is desired to produce an eruption or a rubefacient effect in bronchitis.

Or,

337. R. Emetinæ, gr. xv
Adipis, 3ss. M.

The emetine is to be dissolved in a small quantity of alcohol, and the solution thus obtained is thoroughly mixed with the lard.

Rubbed on the skin for a few minutes once or twice a day, this ointment produces a copious crop of small pustules, unattended with pain, which remain out for many days and leave no scars. In this last point it has an advantage over tartar emetic ointment, for which Dr. T. proposes it as a substitute.

DR. DE SMET, FRANCE.

338. R. Cinchonæ rubræ pulveris,
Sulphuris præcipitati, ss 3v
Syrupi althææ, q. s. M.

Make an electuary, of which give three or four teaspoonfuls a day, in the chronic bronchitis of old persons, and of those in feeble health predisposed to diarrhoea.

339. R. Antimonii et potassii tartratis, ʒj
Tincturæ cantharidis, f.ʒij. M.

Rub a small quantity of this liquid on the front of the chest and apply a flannel.

In this manner an eruption is developed which acts efficiently in acute bronchial affections. Or, for the same purpose, the following may be used:—

340. R. Spiritûs camphoræ,
Tincturæ cantharidis, ss f.ʒiss. M.
To be employed as above.

PROF. WILLIAM STOKES, M. D., DUBLIN.

341. R. Potassii iodidi, ʒij
Tincturæ opii camphoratæ, f.ʒss
Decocti senegæ, f.ʒiv
Syrupi tolutani, f.ʒiss. M.

Two teaspoonfuls a day, in chronic bronchitis.

342. R. Tincturæ opii camphoratæ, f.ʒss
Ætheris, ss
Tincturæ tolutanæ, ss f.ʒij. M.

A teaspoonful in a small quantity of a warm drink, to quiet the cough, in bronchitis.

343. R. Tincturæ opii camphoratæ,
Tincturæ scillæ, ss f.ʒiss
Ammonii carbonatis, gr. xvij
Decocti senegæ, f.ʒiv
Syrupi tolutani, f.ʒss. M.

Two or three teaspoonfuls a day in chronic bronchitis, after the inflammatory symptoms have lost a little of their intensity.

344. R. Acidi benzoici,
 Ammoniaci, ss 3ss
 Saponis, q. s. M.

Divide into 20 pills. From four to eight in the twenty-four hours, in chronic pulmonary catarrh. Repeated sinapisms to the chest

SIR THOMAS WATSON, LONDON.

In cases of chronic bronchitis, which are especially remarkable on account of the great abundance of the bronchial secretion, our author has derived great advantage from the administration of the *sulphate of iron* in two or three grain doses, in the *compound infusion of rose*, thrice daily. When there is any fever present, these remedies are apt to augment it; but when the pulse is quiet and the skin cool, they are often of the greatest service.

Our author has also seen the excessive expectoration diminish, and the patient gain strength, under the use of the balsams, the *compound tincture of benzoin*, for example, a form of medicine much employed formerly, and too much neglected at present.

JOHN WILLIAMS, M. D., LONDON.

345. R. Ammoniaci,
 Ammonii carbonatis, ss gr. xv
 Ipecacuanhæ, gr. iv
 Morphiæ muriatis, gr. iss
 Mucilaginis acaciæ, q. s. M.

Divide into 10 pills, which coat with a solution of balsam of tolu in chloroform. One pill, morning and evening, in chronic bronchitis; especially when the secretion is thick and the expectoration difficult.

RÉSUMÉ OF REMEDIES.

Acidum Carbolicum, by atomized inhalation, is of service when the bronchial secretions acquire a repulsive fetor.

Allium. After the febrile stage has passed, syrup of garlic, or the domestic onion syrup, is a very useful expectorant, particularly for children.

Alumen. Dr. F. L. ANDREWS, of London, recommends alum in acute as well as in chronic bronchitis, both in children and adults, when the expectoration is ropy. To children of three years he gives one grain in solution every five or six hours, to adults six or eight grains at like intervals.

Ammoniacum is often a decidedly useful remedy (F. 296, 304, 345).

Ammonii Carbonas is an excellent stimulant expectorant, of benefit in the advanced stages of bronchitis when there is no febrile action present. The following formula may be employed:—

346. R. Ammonii carbonatis, gr. iv
 Spiritus chloroformi, ℥xx
 Aquæ camphoræ, f. 3x. M.

To be taken every three or four hours.

Infusion of senega may often replace with advantage the camphor water in this recipe. It is of especial benefit in the *asthenic bronchitis of old age*.

* *Ammonii Chloridum* is a most valuable remedy in chronic bronchitis, but must be given in ten-grain doses in order to be effective (F. 305, 306, 307, 312). The following is a useful formula:—

347. R.	Ammonii chloridi,	ʒij
	Spiritus ætheris compositi,	f.ʒij
	Extracti glycyrrhizæ,	ʒi
	Decoctum senegæ,	ad. f.ʒvj.

Tablespoonful every two or three hours. Ipecacuanha or squill may be added, if indicated.

Angelica is useful in the chronic bronchial catarrh of aged and feeble persons, under circumstances when senega is usually prescribed.

Antimonii Oxy-iodidum is of service in subacute bronchitis.

Arsenicum is recommended by Dr. THOROWGOOD (*Lancet*, November 13th, 1869) in chronic bronchitis, where copious expectoration and much emaciation are present. At times he finds it to act quite like a specific in improving the breathing. He gives ℥ij of FOWLER'S solution in alkaline infusion of columbo thrice daily.

Assafætida is of service when the cough is spasmodic, and the expectoration difficult, on account of general debility. It is, therefore, often useful in the chronic bronchitis of old persons.

Balsamum Peruvianum. The balsams, both of Peru and of Tolu, are useful stimulant expectorants, and vehicles for squill and other remedies of the same kind, in chronic bronchitis (F. 311, 341, 342, 343, 344). The vapor, obtained by placing them upon a piece of hot iron or hot coals, is also of benefit.

Benzoinum. The compound tincture of benzoin is a useful stimulant expectorant; the tincture of benzoin may often be employed with benefit, by means of a steam atomizer. Benzoin must be used only in cases not injuriously influenced by stimulation.

Calcis Phosphas, in doses of gr. i-ij several times a day, is recommended by Dr. RINGER, as of great value in checking profuse discharges in chronic bronchitis.

Cetraria has been highly recommended in chronic bronchitis attended with copious purulent or mucous expectoration.

Chiretta has proved useful in chronic bronchitis associated with copious expectoration and exhausted powers of the system.

Chondrus has an extended reputation in chronic bronchitis, but is not a very active agent.

Cimicifuga is especially useful in the chronic bronchitis and coughs of old age.

Cinchona. The acidulated cold infusion of bark is very useful when there is rapid wasting of the system, under the influence of profuse expectoration and night sweats.

Colchicum is sometimes prescribed; it is more particularly indicated in gouty bronchitis (F. 318).

Conium, in the form of the compound pill (gr. v-x) is frequently useful. Squill increases its efficacy. Vapor conizæ may be inhaled with benefit.

Copaiba often restrains and modifies the bronchial secretion in chronic bronchitis attended with profuse expectoration, when there is no fever and not much vascular irritability (F. 316).

Creasotum is sometimes given by inhalation and by the stomach, in the bronchorrhœa of old persons.

Creta Præparata is recommended by Dr. COPLAND in chronic bronchitis in the

advanced stages, particularly when colliquative sweats and diarrhoea are present. He employs the following mixture, which, even when the bowels are regular, is by no means productive of constipation :—

348. R.	Misturæ cretæ,	f.℥vjss	
	Vini ipecacuanhæ,	f.℥iiss	
	Tincturæ opii camphoratæ,	f.℥vj	
	Syrupi tolutani,	f.℥iij.	M.

Tablespoonful three or four times daily.

Cubeba, in small and often repeated doses, is of service in the chronic bronchitis of old age, attended with profuse secretion and much debility of constitution (F. 298, 316).

Cuprum Ammoniatum is said to be serviceable in severe chronic bronchitis accompanied with spasmodic cough.

Digitalis. The tincture is occasionally useful as a sedative adjunct to expectorants.

Dulcamara is frequently a useful sedative for the cough.

Ferri Mistura Aromatica is highly praised, as calculated to improve the general health and check superabundant secretion, by Dr. GRAVES. He orders

349. R.	Misturæ ferri aromaticæ,	f.℥iiss—iij	
	Aquæ menthæ piperitæ,	f.℥vj.	M.

Tablespoonful thrice daily.

Ferri Nitratis Liquor is of service in doses of gtt.x—xv, thrice daily, when tonics and astringents are indicated.

Ferri Sulphas is recommended by Sir THOMAS WATSON when there is excessive bronchial secretion (p. 146).

Ipecacuanha is a useful expectorant, usually given combined with other remedies (F. 300, 311, 317, 325, 335, 341, 342, 343, 345).

Larix Europæa is recommended by Dr. GREENHOW, to check profuse passive expectoration in chronic bronchitis (p. 143).

Lobelia is a serviceable sedative, allaying spasm and facilitating expectoration. It is usually given in combination with other remedies.

Marrubium. The expressed juice of the fresh plant, taken with milk, has been strongly recommended.

Myrrha, when there is no fever or irritability present, is a valuable medicine in long standing chronic bronchitis, particularly after a course of expectorants.

Nitro-muriaticum Acidum is of service when tonics are indicated (F. 314, 325).

Oleum Morrhuæ is often of signal service in chronic bronchitis.

Opium, though often of much service in allaying bronchitic cough, may prove dangerous if there is much accumulation in the bronchi.

Piz Liquida is of some value in bronchial catarrh (F. 309). The following formula was recommended by the late Prof. DUNGLISON :—

350. R.	Picis liquidæ,	f.℥j	
	Aquæ destillatæ,	Oij.	M.

Digest for eight days and decant. Dose, from eight to twelve tablespoonfuls daily, in milk.

Plumbi Acetas frequently proves useful when there is profuse mucous secretion (F. 310).

Potassii Carbonas is of service in thinning the secretion (F. 311).

Potassii Chloras is recommended by Prof. DA COSTA in both acute and chronic bronchitis, to thin the secretion and promote expectoration (F. 307, 308).

**Potassæ Liquor*, ℥x-xv added to an ordinary expectorant mixture, is often attended with good results when the sputa is scanty, thick and viscid.

Potassii Ferrocyanidum is recommended by Prof. DUTCHER (F. 318).

**Potassii Iodidum* acts beneficially in the advanced stages of chronic bronchitis, in restraining inflammatory action and promoting absorption. (F. 315, 320, 321, 341).

Sanguinaria is sometimes employed alone, but is usually associated with other remedies.

Scilla is of service after all active inflammation has subsided, in mild cases unattended with purulent expectoration. It is best combined with an alkali and a small quantity of opium (F. 300, 304, 308, 317, 318, 329, 330, 331, 332, 343).

**Senega* is a highly serviceable remedy, particularly when combined with carbonate of ammonium.

**Sodii Hypophosphis*, or *potassii hypophosphis*, is useful in very chronic cases, with thick fetid expectoration. Camphor water is a good vehicle.

Stramonium is recommended, combined with expectorants, by Dr. HEADLAND, in the form of the tincture (℥x), in the chronic bronchitis of the aged, where there is great dyspnoea, accompanied by a dry state of the tubes.

Strychnia or *nux vomica*, in small doses, with iron, is advocated by Dr. THORNGOOD, especially when there is constant dyspnoea with prolonged expiration (*Lancet*, Nov. 13, 1869).

Sulphur combined with acid tartrate of potassium is recommended by Dr. GRAVES.

Tannicum Acidum is useful when an astringent is indicated.

Uva Ursi has proved of benefit when there was purulent expectoration and hectic fever.

Zinci Sulphas is recommended by Dr. BARLOW. He employs the following combination for moderating the cough and expectorations:—

351. R.	Zinci sulphatis,	gr. j	
	Extracti conii,	gr. iv.	M.
	One pill thrice daily.		

Zingiber. The infusion is sometimes useful in the bronchial catarrh of advanced life.

Alkalies are useful in chronic bronchitis, when the expectoration is thick and viscid.

Diuretics are of benefit in the protracted bronchitic affections of the aged (F. 299, 300).

Emetics are recommended in chronic bronchitis, by Dr. GRAVES, when there is no fever, no remarkable dyspnoea nor acceleration of the pulse, but when the secretion is very copious. In such cases, an emetic every night for two or three nights is productive of great advantage, freeing the stomach and lungs from a large amount of mucus, rendering the expectoration easier, clearing the tongue and improving the appetite.

Inhalations are frequently employed in the treatment of chronic bronchitis; The following are the principal drugs used:—*Alum* (F. 301, 313). *Balsams of Peru and Tolu*; *Carbolic Acid* (F. 326, 328); *Chlorine*:

Chloroform, a few whiffs, may be of signal but only temporary benefit (F. 322); *Conium Vapor*; *Creasote* (F. 334); *Iodine* (F. 303, 322); *Olibanum Fumigations* (the gum rosin placed on burning coals); *Tar Vapor* (generated by heating tar over a spirit lamp, with the addition of a small quantity of potash to neutralize the irritant fumes); *Nitre Paper Fumes* (F. 234, 252, 259); *Sulphurous Acid Spray or Fumigation*; *Tannic Acid* (F. 302); *Turpentine* (F. 333); *Hot Water Vapor*; *Sulphate of Zinc* (F. 324).

Stimulants are frequently indicated in the bronchitis of the aged.

EXTERNAL REMEDIES.

Baths. An alkaline bath sometimes proves useful.

Counter-irritants. The following combination of *aqua ammoniæ* applied to the chest is an efficient counter-irritant:—

352. R.	<i>Aquæ ammoniæ</i> ,	f. 3ss-j	
	<i>Olei amygdalæ</i> ,	f. 3ss	
	<i>Olei rosmarini</i> ,	f. 3j	
	<i>Aquæ</i> ,	f. 3ij.	M.

Tartar-emetic ointment is occasionally employed as an irritant to the chest, but other irritants are generally preferred. *Croton oil* liniment is sometimes very useful. *Turpentine* liniments are highly serviceable. The following combination, supposed to be an imitation of that used by ST. JOHN LONG, is recommended by Dr. GRAVES:—

353. R.	<i>Olei terebinthinæ</i> ,	f. 3iij	
	<i>Acidi aceticæ</i> ,	f. 3ss	
	<i>Ovi vitelli</i> ,	j	
	<i>Olei limonis</i> ,	f. 3j	
	<i>Aquæ rosmarini</i> ,	f. 3ijss.	M.

To be well rubbed in over the chest, the nape of the neck, the epigastrium, and the course of the cervico-spinal and pneumogastric nerves generally. *Sinapisms* to the chest are sometimes of service.

Electricity. A fine primary induction current, of low intensity, passed through the chest from the back and neck, stimulating the sympathetic and spinal nerves, has been found productive of great benefit.

Nitro-muriatic Acid lotions sponged over the chest are recommended for checking profuse expectoration, and mitigating the severity of the symptoms.

Plasters. A *Burgundy pitch* plaster often proves of service as a protective against atmospheric changes, and as a rubefacient. An *opiate* plaster is sometimes of benefit.

**Poultices*. Large, light, soft linseed-meal poultices, made to cover the whole of the chest often afford great relief in chronic bronchitis. If it be desirable to stimulate the skin, *Mustard* (1 part to 4) may be added; if there be much pain, *Laudanum* may be sprinkled over the surface.

Issues at the nape of the neck sometimes remove or mitigate the symptoms.

See, also, Chronic Catarrh, p. 153.

CATARRH.

HORACE DOBELL, M. D., LONDON.

Catarrh steals, in an insidious way, its marches on its victims. However simple in character and short in duration the first attacks may be, they dispose the mucous membrane to fresh attacks; each attack involves a larger extent of surface than its predecessor; when once the complaint has reached the finer ramifications of the bronchi, it lurks there still—even after the larger tubes have been restored to temporary health—every fresh attack of catarrh in the larger passages supplying the lurking enemy with reinforcements, and enabling it to advance from its fastnesses, and to encroach further and further upon the respiratory tract, until, at last, it needs but a breath of wind upon the lining of the nose or fauces to raise a storm of rebellion throughout the length and breadth of the naso-pulmonary mucous membrane.

If we could nip every catarrh in the bud, what a catalogue of ills we should prevent! And yet this is not a very difficult thing to do, when there is a chance of trying it. But, unfortunately, colds are thought so lightly of by patients, that they seldom try to stop them till they have become severe, have lasted an unusual time, or have produced some complication. Nevertheless, it is our author's opinion, they would do better in this respect if they had more faith in the possibility of stopping colds; if their doctors would impress upon them more the importance of stopping them; and especially if they knew that *colds can be stopped without lying in bed, staying at home, or in any way interfering with business.*

Our author's plan of stopping a cold, while it will not answer if the cold be thoroughly established, is almost infallible if begun directly the first signs of catarrh show themselves in the nose, eyes, throat or chest—in fact, before any considerable amount of secretion has taken place. The plan is as follows:—1. Order.

354. R.	Ammonii carbonatis,	℞j	
	Morphiæ sulphatis,	gr. ʒ	
	Misturæ amygdalæ,	f. ʒiv.	M.

Two tablespoonfuls every three hours.

2. At night give a tablespoonful of spirit of mindererus in a tumbler of cold water, after the patient has got into bed and been covered up with several extra blankets; cold water to be drank

freely during the night should the patient be thirsty. 3. In the morning, the extra blankets should be removed, so as to allow the skin to cool down before getting up. 4. Let him get up as usual, and take his usual diet, but continue the ammonia and morphia mixture every five hours. 5. At bedtime, the second night, give a compound colocynth pill. No more than twelve doses of the mixture, from first to last, need be taken, as a rule; but should the catarrh seem disposed to come back after leaving off the medicine for a day, another six doses may be taken and another pill. During the treatment, the patient should live a little better than usual.

As everything depends upon the promptitude of the treatment, persons who are subject to catarrh, especially if it inclines to the influenza character, should be provided with a prescription for the medicine, and full instructions how to manage themselves when a cold sets in. Many old catarrhal patients of the author, who have been accustomed for several years to stop their colds in this way, have given their medicine the somewhat unprofessional title of the "Magic Mixture," so often has it saved them from their old enemy.

An addition to this plan is needed in persons whose colds seize at once upon the bronchial mucous membrane. Besides the manner of proceeding just described, they should use the following inhalation:—

355. R.	Extracti conii,	gr. x	
	Tincturæ benzoini,	f. ʒij	
	Spiritus ammoniæ aromatici,	f. ʒss	
	Aquæ (170° F.),	Oj.	M.

Inhale the steam for fifteen minutes at bedtime each night, put a mustard plaster on the front of the chest one night, and between the shoulders the next; and unless the weather is warm, wear a respirator out-doors until all signs of the cold have disappeared.

RÉSUMÉ OF REMEDIES.

Acetum. Bathing the chest every morning with vinegar and water, often diminishes the liability to an attack in persons subject to repeated catarrhs.

Aconitum is highly recommended by Dr. RINGER, at the outset of febrile catarrh:—

356. R.	Tincturæ aconiti radicis,	℥viii-xvj	
	Aquæ,	f. ʒij.	M.

A teaspoonful every ten or fifteen minutes, for two hours, and afterwards repeated every hour. If there be much prostration and the pulse be feeble and weak, the dose should be diminished. So soon as the sensation of "pins and needles" be produced, the aconite, which has then been pushed to its full extent, should be stopped.

Ammonii Acetatis Liquor is often of great service.

Ammonii Carbonas is a very useful remedy in this affection. For Dr. DOBELL's method of employing it to stop a cold, see p. 151.

Arsenicum is of benefit, when the affection is of a local character, and when there is an absence of inflammatory action and febrile disturbance, which states contra-indicate its use.

Ipecacuanha. A full dose of Dover's powder (gr.x), taken at bedtime and at the very outset of the attack, often arrests it.

Lini Infusum is an excellent demulcent.

* *Opium*. A full opiate at bedtime, followed by a laxative in the morning will, if given at the outset, frequently cut short a common attack of catarrh.

Scilla is useful after all active inflammation has subsided, before which time it should never be employed. It unloads the air passages and relieves congestion and dyspnoea. Dr. C. J. B. WILLIAMS states that squill is principally useful in mild cases, unattended with purulent expectoration. He combines it with an alkali and a small portion of opium, to prevent its too rapid passage by the kidneys.

Spiritus Ætheris Nitrosi is a popular and efficacious remedy.

Baths. A Turkish Bath is often beneficial.

Inhalations. Conium inhalations are recommended by Dr. DOBELL (F. 355).

Turpentine inhalations are recommended by Dr. BEIGEL. The frequently repeated inhalations of the vapor of *hot water*, in most instances, afford a remarkable amount of relief.

CHRONIC CATARRH.

Ammoniacum is a useful remedy in the chronic catarrh of old age.

357. R.	Ammoniaci,	ʒij	
	Acidi nitrici diluti,	f.ʒij	
	Misturæ acaciæ,	f.ʒviii.	M.

Two tablespoonfuls in any bland fluid, every two hours.

Cannabis Indica is highly praised by Dr. WARING CURRAN (*Medical Press*, September 9, 1868) as a sedative and expectorant. He orders the following mixture:—

358. R.	Tincturæ cannabis indicæ,	f.ʒij	
	Pulveris tragacanthæ compositi,	ʒj	
	Ætheris chlorici,	f.ʒiiss	
	Aquæ anisi,	f.ʒvj.	M.

Two tablespoonfuls every second hour.

Galbanum is frequently serviceable.

Sanguinaria. The regular employment of small doses of the tincture of this root often affords relief in protracted catarrhal affections, assuming the character of incipient phthisis. It should be persevered in for several weeks.

* *Senega* is a very useful remedy in chronic catarrh.

Fumigations. Prof. TROUSSEAU highly recommends *benzoin* fumigations in chronic catarrh. The air of the patient's apartment should be impregnated with the vapor of benzoin, the drug being thrown upon burning coals; or it may be inhaled from a common inhaler, the balsam being placed in barley water.

Inhalations. *Oxygen* inhalations have been advised in catarrh complicated with emphysema. *Sulphurous acid* fumigation (sprinkle from time to time, on a few red hot cinders, a small portion of sulphur, so as to fill the room not inconveniently with the fumes), or spray, is highly recommended.

powder and forcibly inspired twice a day or oftener, according to the exigencies of the case; or, a glycerite of tannin, applied with a brush, after the parts have been cleaned by the usual douche or otherwise.

Ammonii Acetatis Liquor is often very useful in coryza.

Ammonii Chloridum, in powder, is a very effective errhine, in coryza.

Arsenicum may often be ordered with benefit, in chronic coryza.

Ætheris Nitrosi Spiritus is a popular and efficacious remedy, in doses of f.ʒj-iss, in a cupful of a convenient vehicle.

Camphora. Snuffing the emanations from a piece of camphor often arrests, it is said, commencing coryza.

Iodinium and its compounds, aided by local iodine applications, are of service in scrofulous coryza.

**Ipecacuanha*. A full dose of Dover's powder, taken at bedtime, at the very outset of the attack of coryza, will often arrest it.

**Opium*. A full opiate at bedtime, followed by a laxative in the morning, will often cut short an attack of coryza, if given at the outset.

Sanguinaria. The powdered root, conjoined with cloves and camphor, and employed as snuff, has been recommended.

Inhalations. *Alum* will diminish profuse secretion and destroy fetor (F. 359).

Benzoin and *Opium* fumes are of service in cases complicated with catarrhal neuralgia (F. 360); *iodine vapor* is useful (p. 154).

EXTERNAL REMEDIES.

Argentii Nitras. Penciling the swollen mucous membrane with a solution of nitrate of silver is recommended by Prof. NIEMEYER (F. 362).

Baths. A Russian Bath, when practicable, is of service.

Curcuma. Inhaling the fumes of burning tumeric is a common East Indian remedy. A small piece of burning tumeric should be placed under a small funnel, and the vapor, as it passes through the small aperture, drawn up into the nostrils.

Electricity. In the acute stage a constant current from six to eight cups, applied by means of a nasal bath, produces good effects. In chronic coryza nearly all cases, it is asserted, may be cured by galvanic and faradic stimulation.

Glycerina may be employed to good effect to soften the plugs of hardened mucus which obstruct the nasal passages, in some forms of chronic coryza.

Hydrargyri Chloridum Mite. A mixture of calomel, red oxide of mercury and white sugar, is recommended as a snuff, by Prof. NIEMEYER (F. 363).

Iodine injections into the nostrils are efficacious when the discharge is offensive (F. 364).

Liquor Sodæ Chlorinatæ. A diluted solution (℥xv-xxx ad. aquæ. f.ʒj), is useful as an injection, when the discharge is fetid. The strength of the solution should never be such as to cause pain.

Snuffs of chloride of ammonium, camphor, sanguinaria and calomel have all been employed.

Zinci Oxidum. The ointment or glycerine introduced into the nasal cavity, by a camel-hair brush, night and morning, is highly serviceable. The patient should be subjected at the same time to a course of iodine, quinine or iron, and the bowels kept soluble.

EMPHYSEMA.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

Little can be done, apart from the treatment of the bronchial congestion. If bronchial spasm prevail, the following may give relief:—

368. R. Spiritus ætheris compositi, ℥.ʒiv-vij
Aque camphoræ, f.ʒiv. M.
A tablespoonful thrice daily.

THOMAS KING CHAMBERS, M. D., LONDON.

369. R. Tincturæ ferri chloridi, f.ʒijss
Tincturæ lobeliæ ætherææ, f.ʒij
Aque camphoræ, f.ʒiv. M.
A tablespoonful, in water, thrice daily.

The object of the iron is to try and restore its full vital powers to the creative arterial blood, so that it may renew the pulmonary membrane, that it may form healthy elastic tissue, instead of the imperfectly elastic degenerated tissue. The lobelia is ordered as a substitute for a more powerful medicinal agent, *tobacco*. Nothing calms the distressing asthma so well as a few whiffs of strong Virginia. Like tobacco, lobelia is a very variable article; there seems to be as much difference between one specimen and another, as between the mildest cigarette and strongest shag. The strongest sort should be used, paying for it the best price at the best shop, so that it may be given in moderate and graduated doses.

MEREDITH CLYMER, M. D., NEW YORK.

For the relief of the asthmatic fits of emphysema, nothing is so sure as a full dose of opium with sulphuric or chloric ether.

370. R. Tincturæ opii, f.ʒj.
Ætheris, f.ʒij. M.
Sixty drops every twenty minutes.

To each dose may be added

Tincturæ lobeliæ ætherææ, gtt.xx.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

371. R. Potassii chloratis, ʒiiss
Tincturæ belladonnæ, f.ʒiiss
Extracti pruni virginianæ fluidi,
Tincturæ cinchonæ compositæ, ℥℥ f.ʒij. M.

A dessertspoonful four times a day, in emphysema with chronic bronchitis and loss of appetite. Also, dry cups applied to the chest morning and evening.

In the treatment of emphysema, strychnia and nux vomica are of no benefit. *Chlorate of potassium* in large doses is of service, so also is the *iodide of potassium*. Care should be taken to prevent the emphysematous patient from having attacks of bronchitis, which aggravate the affection.

In the bronchial complications of emphysema, the following formulæ will be found useful :—

372. R. Tincturæ lobeliæ, f.℥j
 Syrupi scillæ,
 Syrupi tolutani, aa f.℥ss
 Misturæ glycyrrhizæ compositæ, f.℥iv. M.
 A dessertspoonful every three hours; with counter-irritation to the chest, with the following :—

373. R. Acidi acetici,
 Olei terebinthinæ,
 Linimenti saponis, aa f.℥ij. M.
 To be rubbed on night and morning.

374. R. Potassii iodidi, ℥ij
 Syrupi ipecacuanhæ,
 Tincturæ scillæ, aa f.℥ss
 Syrupi, f.℥ij. M.
 A tablespoonful thrice daily.

Together with counter-irritation to the chest.

375. R. Chloroformi, f.℥ss
 Linimenti ammoniæ,
 Linimenti saponis, aa f.℥iss. M.
 To be rubbed on morning and evening, and to be placed on flannel, and allowed to remain against the skin for fifteen minutes.

376. R. Potassii iodidi, ℥ij
 Extracti senegæ fluidi, f.℥j
 Syrupi pruni virginianæ, f.℥ij. M.
 A teaspoonful thrice daily.

377. R. Tincturæ lobeliæ, f.℥ss
 Extracti valerianæ fluidi, f.℥j
 Spiritus ætheris compositi, f.℥j
 Potassii chloratis, ℥iv
 Syrupi tolutani, f.℥j
 Aquæ, f.℥ss. M.
 A dessertspoonful, in water, four times a day or oftener if the oppression be great.

Also the following :—

378. R. Chloroformi, f.℥ss
 Olei terebinthinæ, f.℥j
 Spiritus rosmarini, f.℥iss. M.
 To be rubbed on morning and evening.

379. R. Atropiæ sulphatis,
In granules, thrice daily.

gr. $\frac{1}{16}$.

The treatment in cases of emphysema should be a double one, to modify the bronchial trouble which keeps up the affection, and to alleviate the difficulty of breathing, which may at times rise into paroxysms of attacks of asthma. In point of radical treatment, there are no means which will cause the distended air vessels to resume their natural size. As a matter of absolute experience our author has thought that he has seen, in cases of pure emphysema, not associated with bronchial symptoms, a long course of *iodide of potassium* (three to five grains, thrice daily, for several months), favorably influence the disease, the respiratory murmur becoming fuller and freer, and the prominence of the chest walls less visible. Good results are also obtained from persistent *counter-irritation*. Small flying blisters at various portions of the chest are serviceable. A number of cases are reported in which the constant employment of the continuous *galvanic current* has led to a diminution in the size of the chest.

E. HEADLAM GREENHOW, M. D., LONDON.

380. R.	Potassii iodidi,	gr. xxxvj	
	Ammonii carbonatis,	ʒi	
	Tincturæ scillæ,		
	Tincturæ hyoscyami,	ss	f ʒss
	Aquæ camphoræ,		f. ʒv. M.

A tablespoonful thrice daily. Also, direct the patient to smoke a stramonium cigarette so soon as he feels the commencement of an asthmatic attack.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

The symptomatic indications in emphysema (our author considers we are totally unable to fulfill the indications of the disease itself, the nutritive alterations upon which it depends being irreparable), are first, the proper treatment of the bronchial catarrh, which almost always accompanies this affection, and greatly adds to the distress of the patient. Habitual wearing of flannel next the skin, stimulants to the chest, warm baths of water or vapor, and the alkaline muriatic mineral springs (especially the thermal springs of Ems), are often of signal benefit.

The next symptomatic indication is to moderate the habitual shortness of breath and the attacks of severe dyspnoea. Sending the patient during the summer to the pine wood region, and particularly to places where there is a heavy fall of dew, will allay the

persistent oppression of the chest. The inhalation of compressed air, for the same reason, is an excellent palliative. To avert the asthmatic attacks, a strict diet, the avoidance of food likely to induce flatulence, light suppers and the keeping of the bowels open, are required.

During the attacks of emphysematous asthma, the narcotics should be used with caution, unless called for by bronchial spasm. The more suitable remedies (beside the emetics, which are very appropriate), are the stimulants, camphor, musk, benzine, and

381. R. Vini portensis, f.℥j-iss.
Every three hours.

When these fail, use

382. R. Olei terebinthinæ, f.℥j-iv
Aque menthæ piperitæ, f.℥iv
Sacchari,
Pulveris acaciæ, aa ℥j. M.
A tablespoonful every three hours.

For the dropsy complicating the affection, vigorous diaphoresis will give excellent results whenever it depends upon a capillary bronchitis. Later in the disease, when it arises from failure of the heart to compensate for the circulatory derangement of the lungs, it may be relieved for a time, by

383. R. Pulveris digitalis, ℥ss-j
Aque, f.℥vj. M.
For an infusion. A tablespoonful thrice daily.

Where digitalis fails, squills may be employed.

384. R. Aceti scillæ, f.℥j
Aque destillatæ, f.℥vj
Potassii carbonas, ad. saturationem. M.
A tablespoonful every two hours.

THOMAS HAWKES TANNER, M. D., LONDON.

385. R. Spiritûs ætheris compositi, f.℥iss
Spiritûs ammoniæ aromatici, f.℥ij
Tincturæ opii camphoratæ, f.℥iss
Aque camphoræ, q. s. ad. f.℥iv. M.
Two tablespoonfuls every half hour until the spasm is relieved.

386. R. Sambulii radicis, ℥ss
Spiritûs ætheris compositi, f.℥iv. M.
Macerate in a stoppered bottle for seven days, and then filter. Dose,
m℥xx-xxx

387. R.	Ammoniaci pulveris,	gr.xv	
	Ipecacuanhæ pulveris,	gr.iiij	
	Morphiæ acetatis,	gr.iss	
	Ammonii carbonatis,	gr.xv	
	Mucilaginis acaciæ,	q. s.	M.

Divide into 20 pills. Two to six a day in emphysema. Ipecacuanha troches to facilitate the expectoration, revulsives on the chest.

For the most part, all that can be done is to give relief by an invigorating diet, rest, warm clothing, attention to the digestive organs, and by the occasional use of tonics and antispasmodics. Amongst the former, *quinine* and *iron* are the most useful. *Strychnia* has failed to be of any service. *Cod-liver oil* ought also to be administered. Amongst the latter remedies, ammonia, ether, hydrocyanic acid, sumbul, etc., are the most promising. Occasionally the vapor of chloroform is of great temporary service. A warm climate is often very beneficial to sufferers from this affection, the dyspnoea being always most urgent in cold weather.

RÉSUMÉ OF REMEDIES.

Ammoniacum has been recommended (F. 387).

Ammonii Carbonas is often employed in combination with other agents (F. 380, 387).

Atropia and *Belladonna* are useful (F. 371, 379).

Digitalis is of benefit in the dropsy complicating the affection (F. 383).

Ferrum. Iron is highly recommended by Dr. CHAMBERS (F. 369).

Rhoscyanus is employed by Dr. GREENHOW (F. 380).

Ipecacuanha troches facilitate the expectoration.

Lobelia, when a good article can be procured, relieves the asthmatic breathing (F. 369, 370, 372).

Oleum Terebinthinæ is advised by Prof. NIEMEYER, during the attacks of emphysematous asthma (F. 382).

Opium, in full doses, affords relief to the asthmatic fits of emphysema. It may be combined with advantage with ether (F. 370).

Potassii Chloras, in large doses, is of service (F. 371, 377).

Potassii Iodidum is often useful (F. 374, 376, 380).

Scilla is of benefit in the bronchial complications of emphysema (F. 372, 374, 380, 384).

Senega is useful in the same class of cases as squills (F. 376).

Spiritus Ætheris Compositus gives relief when bronchial spasm is present (F. 368, 377, 385).

Strychnia and *Nux Vomica* are, according to Prof. DA COSTA, of no benefit in this disease.

Tabacum. Nothing, according to Dr. CHAMBERS, calms the distressing asthma so well as a few whiffs of strong Virginia.

Stimulants are recommended by Prof. NIEMEYER, during the attacks of emphysematous asthma (p. 160).

EXTERNAL REMEDIES.

Counter-irritants to the chest are often useful (F. 373, 375, 378).

HÆMOPTYSIS.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

388. R. Potassii bitartratis, ʒj
Pulveris opii, gr.ij-iv. M.

For 8 powders. One every four or six hours.

389. R. Plumbi acetatis, ʒj-ʒj
Pulveris opii, gr.x. M.

For 20 pills. One every four or six hours.

When hæmoptysis is connected with amenorrhœa, preparations of iron often succeed when the above remedies fail. Thus :—

390. R. Ferri sulphatis, ʒij
Magnesii sulphatis, ʒijss. M.

For 20 powders. One thrice daily.

This will often restore the menstrual secretion and cure the hæmoptysis. Indeed, it is in this form of amenorrhœa that iron is most successful.

391. R. Spiritus terebinthinæ, f.ʒss.
For one dose, if the bleeding is attended with vascular excitement.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

392. R. Acidi gallici, gr.xx.

For one powder. In acute hæmoptysis. To be repeated every ten minutes until hemorrhage ceases.

393. R. Cupri sulphatis, gr.ʒ
Ferri sulphatis, gr.ij
Extracti hyoscyami, gr.j. M.

For one pill, thrice daily.

In persistent slight pulmonary hemorrhage. Sulphate of copper in such cases seems to control the circulation within the lungs, and to arrest a tendency to bleeding. This action is not due to its nauseating effect, for, in this dose, it does not nauseate. The administration of cod-liver oil should be postponed until the hæmoptysis is gotten rid of.

394. R. Ferri chloridi, gr.ij-x
Aquæ destillatæ, f.ʒj. M.

For inhalation by atomizer.

395. R. Liquoris ferri subsulphatis, ʒx-xl
Aquæ destillatæ, f.ʒj. M.

For inhalation by atomizer.

396. R. Acidi tannici, gr. x-xx
 Aquæ destillatæ, f. 3j. M.
 For inhalation by atomizer.
397. R. Pulveris alumenis, gr. xxx
 Aquæ destillatæ, f. 3j. M.
 For inhalation by atomizer.

HORACE DOBELL, M. D., LONDON.

398. R. Extracti ergotæ fluidi, f. 3ij
 Tincturæ digitalis, f. 3ij
 Acidi gallici, 3j
 Magnesii sulphatis, 3v
 Acidi sulphurici diluti, f. 3j
 Infusi rosæ compositi, f. 3vj. M.

Two tablespoonfuls every three hours until the hemorrhage is arrested.

In spite of the fashionable outcry against complicated prescriptions, Dr. DOBELL recommends the above as the most efficacious and the most rational combination of remedies for a case of profuse tubercular pulmonary hemorrhage. In any given case, either of the ingredients may be omitted, if the symptoms indicate that it is not required, or that it has already done its duty. The object of the ergot is to contract the vessels; of the digitalis, to steady the heart; of the gallic acid, to clot the blood; of the epsom salts, to relieve the congestion; and of the dilute sulphuric acid, to assist the rest.

DR. GUÉNEAU DE MUSSY, FRANCE.

399. R. Extracti krameris pulveris, 3j
 Ergotæ pulveris, 3ij
 Digitalis pulveris, gr. viij
 Extracti hyoscyami, gr. iv. M.

Divide into 20 pills. From five to six a day, in the spitting of blood so frequent in pulmonary consumption. Absolute rest; ice by the mouth; sinapisms to the upper and lower limbs successively.

400. R. Acidi sulphurici diluti, f. 3j
 Aquæ menthæ piperitæ, f. 3vj
 Syrupi rubi, f. 3j. M.

A tablespoonful to be given every hour, in hæmoptysis or passive hæmorrhages.

401. R. Extracti krameris, gr. xv-3j
 Aluminii et potassii sulphatis, gr. iiss
 Infusi rosæ compositi, f. 3iv
 Syrupi acidi citrici, f. 3j. M.

A tablespoonful every half hour, in hæmoptysis. Energetic counter-irritation to the skin.

quietude and silence, are essential aids; mouthfuls of ice, and the *cautious* application of ice-bags to the spine, or over the heart, will sometimes instantaneously arrest the flow, heat being at the same time applied to the extremities; *digitalis* is valuable in cases of irritable heart and moderate hæmoptysis; refrigerants, such as *nitrate of potassium*, sulphuric and other acids, are useful adjuvants.

(b.) To fulfill the second indication: *acetate of lead*, in doses of two to four grains, with dilute acetic acid and laudanum, every half hour, hour, or two hours; *alum*; *ergot*; *matico*; and *gallic acid*. Dr. W's experience leads him to place greater trust in gallic acid than in any other agent of the class, in doses of 20 to 30 grains, every half hour at first. Drachm doses of kitchen salt, either in powder or dissolved in water, sometimes, even when they produce emesis, promptly arrest the hemorrhage. *Hypodermic injections of ergotine* are deserving of trial.

RÉSUMÉ OF REMEDIES.

Aceticum Acidum Dilutum is employed both externally and internally, but is a remedy of minor importance.

Alumen is serviceable in purely atonic hæmoptysis. It may be given in solution, by inhalation (F. 397), or be allowed to dissolve slowly in the mouth, in substance or in lozenge. In moderate but persistent tubercular hæmoptysis Dr. SYMONDS recommends (*British Medical Journal*, June 13th, 1868) the following:—

405. R.	Alumenis,	℞ij	
	Acidi sulphurici diluti,	f.℥ijss-iv	
	Magnesii sulphatis,	℞iv	
	Aquæ,	f.℥iv.	M.

A tablespoonful in water, every three hours, or oftener, as required

Ammonii Chloridum is recommended by Dr. COPLAND, in combination with muriatic acid, in passive cases of hæmoptysis, when the vital powers are depressed. The following is his formula:—

406. R.	Ammonii chloridi,	℥iss	
	Acidi muriatici,	f.℥ss	
	Decocti hordei compositi,	℞j.	M.

A small wineglassful every two or three hours.

Argenti Oxidum, in doses of gr. ss-j, thrice daily, has been recommended, in atonic hæmoptysis.

Copaiba is much employed by Prof. NIEMEYER (F. 403).

Creasotum fails to give satisfactory results.

Cupri Sulphas is highly recommended, by Prof. DA COSTA, in cases of persistent slight hemorrhage (F. 393).

* *Digitalis* is advised by Dr. WALSH when there is irritable heart and moderate hæmoptysis. By some it is regarded as the best remedy for hemorrhage from cavities in the advanced stages of phthisis (F. 398, 399).

Ergota is strongly recommended by Dr. DOBELL, who, however, usually associates it with other remedies (F. 398, 399, 402).

Ferrum is particularly of service in hæmoptysis connected with amenorrhœa. The preparations most employed are the tincture of the chloride, the solution of the nitrate (in large doses, ℥xxx-℥), and the sulphate (F. 390, 393).

****Gallicum Acidum** is highly recommended by Prof. DA COSTA, WALSHÉ, and others, as one of the best remedies in hæmoptysis, but it must be given in large doses (F. 392, 398).

Hydrocyanicum Acidum seems to possess some power in controlling hæmoptysis when the system is irritable and spasmodic symptoms are present.

***Ipecacuanha** is recommended by Prof. GRAVES and other practitioners, as a remedy of considerable value. From one to two grains are given every fifteen or thirty minutes until nausea is felt, when the benefit is generally evident, and the medicine is discontinued. Many cases are reported attesting the efficacy of this treatment in arresting the hemorrhage and restoring heat and life to patients who were in a state of collapse from excessive loss of blood. Although it is better to avoid vomiting, no ill effects, it is said, are produced by it. The hæmoptysis of the early stages of phthisis may often be readily arrested by this remedy.

Matico is sometimes employed. In slight cases the infusion alone is often sufficient.

Phosphoricum Acidum Dilutum, in doses of gtt. x-xxx in mucilage, thrice daily, is reported upon favorably by M. HOFFMAN (*The Practitioner*, August, 1868), who considers it superior to other mineral acids in hæmoptysis.

***Plumbi Acetas**, in combination with morphia and acetic acid, or with opium, is a remedy much used. Dr. PEREIRA considers that the action of sugar of lead and opium in hæmoptysis is rendered more certain and speedy, by being given with a draught containing nitric acid, nitrate of lead being thus formed in the stomach.

Potassii Nitras is useful when there is much excitement and fever, but is not to be relied upon alone. It may be given in doses of gr. viij-x, several times daily, largely diluted, or combined with tartar emetic or digitalis.

Sodii Chloridum is recommended, by Prof. WALSHÉ, in drachm doses, either in powder or dissolved in water. It is sometimes promptly successful, even when it produces emesis.

***Sulphuricum Acidum Dilutum** is a useful remedy, though less certain in its action than gallic acid, and is a valuable adjunct to other treatment. (F. 398, 400, 405).

Tannicum Acidum, in combination with opium and ipecacuanha, has been highly recommended.

Terebinthinæ Oleum deserves a trial, if other less nauseous remedies fail (F. 391).

Refrigerants are useful adjuncts to treatment. Nitrate of potassium, sulphuric acid, or cream of tartar (F. 388, 398) may be employed.

Hypodermic Injections of Ergotine are recommended, by Prof. WALSHÉ, as deserving of trial.

Frigus. Ice cautiously applied to the spine, or over the heart, will sometimes instantaneously arrest the flow, heat being also applied to the extremities.

Inhalations. The following have been advised: *alumen* (F. 397); *ferri chloridum* (F. 394); *ferri subsulphas* (F. 395); *tannicum acidum* (F. 396).

LARYNGITIS.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

If there be time, in a case of acute laryngitis, commence by the inhalation of the steam of boiling water, as much by the nostrils as possible. Leeches, followed by hot fomentations, may be applied to the throat.

If benefit do not follow these remedial measures, tracheotomy ought not to be delayed. The air for respiration ought to be warm and moist, and plenty of it, through a large-sized canula, the orifice of which must be kept clear of secretion.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

407. R. Ammonii chloridi, gr. x-xx
Aque destillatæ, f. ʒj. M.
Use with any form of steam atomizer, throwing a fine spray. In *laryngeal catarrh*, acute as well as chronic. The dose best borne is not above ten grains to the ounce, although as much as two drachms to the ounce have been employed.

THOMAS HAWKES TANNER, M. D., LONDON.

408. R. Acidi hydrocyanici diluti, m̄ xv
Spiritus chloroformi, f. ʒiij
Aque bullientis, f. ʒviij. M.
For inhalation.

The patient should frequently inhale the steam from medicated boiling water, and in the interval it will prove advantageous for him to wear a respirator. He is to be closely watched, kept very quiet, and not allowed to talk. The air of the room must be made warm and moist.

L. WALDENBERG, M. D., BERLIN.

409. R. Sodii chloridi, gr. iv-x
Aque destillatæ, f. ʒj. M.
For inhalation in acute laryngeal catarrh by means of nebulizer.

LONDON HOSPITAL.

410. R. Tincturæ benzoini compositæ, f. ʒj
Aque bullientis, f. ʒx. M.
Let the vapor be inhaled frequently.
411. R. Tincturæ iodinii, m̄ xl
Aque bullientis, f. ʒx. M.
To be inhaled frequently.

RÉSUMÉ OF REMEDIES.

Acidum Carbolicum. The inhalation of pulverized solutions of carbolic acid (gtt. j-v to f. ʒj, aq., with a few drops of glycerine added) is frequently of service.

Alumen, as an emetic (teaspoonful doses mixed with honey or syrup, and repeated every ten or fifteen minutes until it operates), is an excellent remedy in pseudo-membranous laryngitis. *See* Croup.

VII. Cleanliness of body is a special point to be attended to.

VIII. Marriage of consumptive females, for the sake of arresting the disease by pregnancy, is morally wrong and physically mischievous.

IX. The medicinal treatment must be adapted to the site of the local deposits and the general nature of the particular case.

To promote and preserve an appetite for food should be constantly kept in view as one of the great objects of treatment. The following chalybeate very rarely disagrees:—

414. R. Vini ferri, f.℥ij.
A teaspoonful thrice daily.

415. R. Pilulæ saponis compositæ,
Pilulæ scillæ compositæ, aa ℥j. M.
For 8 pills. One at bedtime, to procure sleep. Two may be given if the cough is troublesome.

Or,

416. R. Pulveris ipecacuanhæ compositæ, ℥iv
Tincturæ scillæ,
Tincturæ tolutanæ, aa f.℥ij
Misturæ acaciæ, f.℥iiss
Aquæ, ad. f.℥iij. M.
A dessertspoonful at night, to quiet the cough.

J. F. CHURCHILL, M. D., PARIS.

The treatment of phthisis by the *hyposulphites* prepared by Dr. CHURCHILL, has been highly vaunted.

The author claims that from the first day of their use there is frequently observed a remarkable increase of nervous power, with a feeling of vigor, strength, and comfort, to which the patient has been long unaccustomed. The digestion is invigorated and the appetite increased. The bowels become regular and the evacuations more copious and less frequent. The cough is relieved, the sleep becomes calmer and more profound, whilst the night sweats diminish or cease altogether. The face becomes fuller, the lips red, the eyes brighter.

If these results be not produced, either the salts are impure, or they are not administered in accordance with the rules laid down by Dr. CHURCHILL, or the patient is suffering from a complication of some other disease, independently of consumption, or the extent of lung structure involved is too great to hope for much benefit.

It is especially as a *prophylactic* that the hypophosphites are recommended by the author, who states that if, without any appa-

rent cause, or under the influence of any cause which induces weakness and exhaustion, such as want, grief, over-fatigue, excess, pregnancy, child-bearing, nursing, rapid growth, slow recovery from illness, a person begins to lose strength, flesh, or appetite, if he suffer from pain in the chest or back, or from shortness of breath; if he complain of sleeplessness, and experiences a general feeling of languor and depression, there is reason to believe that he is predisposed to consumption, or is even already laboring under the general disease. If to the above symptoms be added cough, however slight, especially if it should have come on slowly and during the fine weather season, the probability is greater still. If, with all this, there is feverishness towards evening, sweating, or clamminess at night, particularly about the head or neck, if spitting of blood should occur, it is probable that the complaint has already arrived at the stage of local manifestation in the lungs. Now if, on the earliest appearance of these signs, particularly those first enumerated, the patient takes daily one or two tablespoonfuls of syrup of hypophosphite of lime or soda, he will usually find all the symptoms disappear, and by continuing the remedy, prevent their return. When all the symptoms shall have disappeared, through the use of the hypophosphites, it will be necessary to continue the treatment for a few months, gradually diminishing the doses, ceasing altogether for a week or two, then beginning again. In this way the disease may be completely eradicated.

DR. CHURCHILL'S usual method of treatment is to give a tablespoonful of the syrup of hypophosphite of soda or lime (of the strength of six grains of the salt to the fluid ounce), once or twice a day, in the absence of any inflammatory symptoms. Sometimes a teaspoonful of syrup of hypophosphite of lime in the morning, and the same dose of syrup of hypophosphite of soda at night. For females, particularly persons of nervous temperament or delicate constitution, leading a sedentary life, and unused to physical exertion, the dose should be decreased one-half. For children from seven to fifteen, the dose is the same as for females. From two to seven years of age, one or two teaspoonfuls daily, of the syrups, are sufficient. For infants of a more tender age, the dose should seldom exceed a quarter or half a teaspoonful in twenty-four hours.

The syrups may be taken alone or in a wineglass of water, and should, in general, be exhibited at meal time, either before or after. They have no medicinal taste whatever.

Or,

429. R. Olei morrhue, f.℥ss.
 For one dose; to be taken three times a day in *carbonic acid water*.

Place in a tumbler a small amount of any preferred syrup (orgeat or sarsaparilla is the best adapted to disguise the taste of the oil), and fill up with carbonic acid water, from a bottle furnished with a syphon for table use; then, while it is still foaming, put in a tablespoonful of the oil. It is astonishing how perfectly the taste is concealed in this manner. Other modes of taking the oil are, floating on ice water, in lemon juice, and in the froth of porter. Less than a tablespoonful is not worth taking: The best time for its administration is between meals, after the process of digestion is pretty well finished. Persons are exceptionally met with who take it in preference just before meals, and thus avoid the disagreeable eructations. Nobody likes to take it the instant after meals.

430. R. Acidi arseniosi, gr. j
 Ferri lactatis, ℥ss
 Syrupi, q. s. M.
 For 30 pills. One thrice daily.

Arsenic is an agent which may frequently be employed with advantage in cases of slow consumption.

It may be given as above, or as follows:—

431. R. Liquoris potassii arsenitis, f.℥ij
 Extracti pruni virginianæ fluidi, f.℥ij. M
 A teaspoonful thrice daily.

432. R. Calcis hypophosphitis, ℥ss
 Sodii hypophosphitis, ℥ij
 Misturæ acaciæ, f.℥ij. M.

A teaspoonful thrice daily, with plenty of cream, eggs, etc., about three ounces of whisky daily and F. 420 for the irritative cough. In a case in which cavities had formed in the lungs.

433. R. Quinæ sulphatis, ℥ij
 Acidi tannici, ℥j
 Extracti gentianæ. q. s. M.
 For 20 pills. One thrice daily, to reduce night sweats.

HORACE DOBELL, M. D., LONDON.

Our author, after a long series of observations, and a process of inductive reasoning, arrived at the conclusion that in tubercular disease there is a defective action of the pancreas on fats, and particularly on solid fats, and thus was led to study the action of the

secretion ; first, with the view to determine its exact character and nature ; and secondly, to find some means of obtaining and preserving the active principles of the pancreas in a form suitable for administration as a remedial agent. He was thus led to the invention and use of the "Pancreatic Emulsion of Fat" and "Pancreatine."

It is the best to give the *Pancreatic Emulsion* from one to two hours after a full meal, such as breakfast or dinner, particularly avoiding a longer interval, and also avoiding warm drinks for two or three hours afterwards. When cod-liver oil agrees, give a tablespoonful of oil directly after breakfast, to supply oleon to the blood through the portal system, and a tablespoonful of emulsion, in a cup of milk or water, two hours after dinner, to supply the blood with pancreatized solid fats through the lacteal system. If cod-liver oil cannot be taken, give the emulsion two hours after breakfast, and two hours after dinner.

In the very few cases in which the stomach does not easily tolerate the emulsion, it is due, almost as a rule, to excessive acidity of the digestive fluids ; and an alkaline powder of soda and columbo, or an effervescing draught of citrate of sodium and potassium, given before the meal which precedes the dose of emulsion, generally overcomes the difficulty. It must be borne in mind that some adults cannot digest milk, and in these cases the emulsion should be mixed with water instead. Brandy or rum may be added in any case, if preferred, and a small plain biscuit should be taken after the dose (*Lancet*, November 17, 1866).

Pancreatine is given in doses of three to five grains, in wine or water, or on bread and butter, directly after food, or immediately after each dose of cod-liver oil.

Dr. DOBELL has prescribed the "Pancreatic Emulsion" in about 2500 hospital cases, and in 187 cases in private practice. Of the latter careful notes were taken and published in the London *Lancet*. In the 187 published cases, emulsion agreed in 180 ; disagreed in seven. Cod-liver oil agreed in 75 ; disagreed in 98 ; was not tried in 14. In these 187 cases no cod-liver oil was given during treatment with emulsion, so as not to confuse the effects of the two remedies. But in daily practice, Dr. DOBELL recommends both oil, and emulsion to be taken, if the stomach will bear them. The proportion of cases in which emulsion agrees will not be as large as here stated, unless care is taken to correct obvious defects in

digestion by other remedies. In the true first stage, our author's experience is derived principally from private practice, such cases not often appearing at hospitals. Of the 2500 hospital cases who have taken the emulsion, many have been in an extremely advanced stage of disease; and in some of these the emulsion has appeared to prolong life in a remarkable manner, being retained on the stomach long after all other kinds of food had ceased to be tolerated.

The experience of the effects of the Pancreatic Emulsion of Fat, as referred to in several journals by a number of independent observers, corresponds in a remarkable degree with the result of Dr. DOBELL's investigations and experiments.

PROF. BALTHAZAR W. FOSTER, M. D., LONDON.

434. R. <i>Ætheris</i> ,	f. $\frac{3}{4}$ ijs	
<i>Olei morrhue</i> ,	f. $\frac{3}{4}$ iv.	M.
Dessertspoonful thrice daily, before meals.		

This is a new physiological attempt to introduce cod-liver oil into the system, by overcoming the difficulty of assimilating fat, which is developed to the greatest extent at the very stages of the disease in which perfect assimilation is most needed. To pour oil into a patient's stomach, without at the same time taking measures to insure its digestion, is a crude kind of therapeutics. Experimental physiology has taught us that the only fluids in the body which have the power of acting upon fat, so as to render it fit for absorption, are the secretions of the pancreas and the duodenal glands. *Æther* has the power of stimulating the glands to renew their healthy action and places the fatty matter in a state of fine division with their abundant secretion. It also masks the unpleasant taste of the oil.

PROF. FURTER, MONTPELLIER.

Our author reported some time ago, before the Paris Academy, his treatment of phthisis, as employed with good results at the clinic in Montpellier, under his charge. It consists in the use of raw mutton or beef, given in conjunction with strongly diluted alcohol, in small doses.

435. Take some finely minced raw mutton or beef, and roll it up in sugar or in a saccharine electuary. Give in teaspoonful doses to the amount of $\frac{1}{2}$ of an ounce per day.

436. R. Alcoholis, f. ʒj
Syrupi, f. ʒiij. M.

A teaspoonful dose every hour. The dose and frequency of administration are to be modified by the patient's individuality.

PROF. R. J. GRAVES, M. D., DUBLIN.

437. R. Quinise sulphatis, gr. iiss
Acidi sulphurici diluti, f. ʒss
Tincturæ hyoscyami, m. xxv
Infusi cascariillæ, f. ʒiij. M.

To be given during the day, in three doses, to combat the night sweats in beginning tubercular phthisis.

438. R. Antimonii et potassii tartratis. gr. xxx
Ipecacuanhæ pulveris, ʒj
Olei tiglij, gtt. xx
Unguenti rosæ, ʒj. M.

A useful ointment to produce slight counter-irritation in delicate women and children.

DR. GUÉNEAU DE MUSSY, FRANCE.

439. R. Belladonnæ radicis pulveris, gr. xv
Acaciæ pulveris, ʒviij. M.

To be used as a snuff, ten or twelve times a day, by consumptive patients with tickling sensations in larynx, and attacks of dry and painful coughing.

440. R. Sodii bicarbonatis, ʒijss
Sulphuris loti, ʒss
Bismuthi subnitratæ, ʒss ʒij. M.

Divide into 20 powders. Give one every two hours. Four or five days of treatment suffice to suspend or notably lessen the night sweats of the consumptive patient, of whom the condition is greatly improved at the end of several weeks.

PROF. JACCOUD, PARIS.

On the Administration of Arsenic in Phthisis.—In chronic phthisis, so soon as the phenomena attributable to anæmia have been remedied by iron, or in the absence of amelioration after a delay of a couple of months, the author abandons ferruginous preparations, and has recourse to arsenical medication. He employs exclusively granules of arsenious acid, of gr. $\frac{1}{10}$ each, and administers them at the commencement of each of the two principal meals. He commences with two a day, and every week increases two a day, until eight or ten a day are given. When this maximum dose is attained, he maintains it indefinitely, unless phenomena of intolerance make their appearance, such as cramps, inflammation of the eyes, cutaneous eruptions, vomitings, diarrhœa. Then, however, he does not stop the medicine, but diminishes, temporarily, the

dose, and returns, as soon as possible, to the maximum of toleration.

Arsenic acts powerfully upon the nutritive processes in chronic pulmonary phthisis. It quiets the nervous excitement, and possesses an anti-febrile action sufficiently marked to effectually combat the evening intermittent fever.

So long as the disease remains chronic, and does not develop acute attacks of pseudo-continuous fever, the arsenical medication ought to be maintained at the maximum of toleration, conjointly with the special regimen, cod-liver oil, cinchona and alcoholized raw meat.

On the Administration of Cod-liver Oil in Phthisis.—When the cod-liver oil is badly supported alone, in chronic pulmonary phthisis, the author adds to it brandy, rum, kirsch or whisky, in the proportion of two parts of the oil to one of the spirit, and recommends the patient to close the nostrils at the moment of swallowing it. He commences by small doses of the oil and spirit mixture; then two tablespoonfuls a day, and advances to five or six fluid ounces a day.

On the Administration of Iron in Phthisis.—The author reserves the employment of ferruginous preparations for those cases where the patients present the certain signs of globular anæmia. He gives, in preference, the syrup of the iodide of iron to young children, and the pills of the iodide of iron in other cases. From four to eight of these pills are to be taken a day, at the commencement of the meals. He advises not to administer the iron where there has been recent hæmoptysis.

On the Administration of Raw Meat in Phthisis.—In the treatment of patients with whom the physician is obliged to dissimulate, he may order the pulp of raw filet of beef, well deprived of all fibrous matter, in some unleavened bread, under the pretext of administering medicinal boluses. When he can act openly the author prefers to mix the pulp of the raw meat, properly prepared, with brandy, rum or whisky, in such a manner as to obtain a dough-like mass, which the patient takes with sugar or salt, according to taste, in tablespoonful doses, during the day. This mixture is very palatable, and does not produce that rapid intolerance which is often observed with other meat preparations.

On the Employment of Counter-irritation in Phthisis.—The author, in acute phthisis, attacks the pulmonary disorder by means

of large flying blisters, renewed without interruption. Instead of the ordinary dressing, he covers the vesicated surface, and envelops it in every direction, a finger's breadth, by diachylon plaster. On removing the protecting plaster at the end of four days, the cicatrization is found complete.

In commencing chronic phthisis, the author applies, under the clavicle of one or both sides, cauteries of Vienna paste, of the size of a sixpence at the maximum, and repeats these punctiform cauterizations as long as any favorable influence is noticed.

441. R. Extracti cinchonæ, ℥ss-j
Tincturæ canellæ, f.ʒij
Syrupi aurantii corticis, f.ʒj
Vini rubri, f.ʒiv
Spiritus vini gallici, f.ʒj-ijj. M.

A tablespoonful every couple of hours, in the exhaustion and delirium of acute phthisis. The patient should also take meat broth or beef essence several times a day.

442. R. Vini cinchonæ f.ʒiv
Tincturæ canellæ, f.ʒij
Syrupi aurantii corticis, f.ʒj
Spiritus vini gallici, f.ʒj-ijj. M.

To be used in the same manner as the above formula, the wine of cinchona replacing the extract and making a mixture not so thick.

443. R. Digitalis, gr.v-vij
Aquæ bullientis, f.ʒj. M.
Make an infusion, filter and add

444. R. Extracti cinchonæ, ℥ss-j
Tincturæ canellæ, f.ʒij
Syrupi aurantii corticis, f.ʒj
Vini rubri, f.ʒiv
Spiritus vini gallici, f.ʒj-ijj. M.

A tablespoonful to be given every hour when, in acute phthisis, the pulse is nearly effaced and the symptoms of cyanosis and dyspnoea increase. The digitalis is to be withdrawn so soon as the contractility of the heart is restored.

445. R. Chlorali, ℥ijss
Olei morrhuæ, f.ʒvj. M.

One or two tablespoonfuls in the evening, to induce sleep, lessen night sweats, and awaken the appetite. The cod-liver oil, to which chloral is added, is less nauseous than the pure oil.

446. R. Spiritus vini gallici, f.ʒijj
Tincturæ canellæ, f.ʒj
Syrupi, aa
Aquæ, f.ʒiss. M.

Dose, a tablespoonful. A convenient way of administering alcohol when indicated in phthisis.

RODERICK MACLAREN, M. D., CARLISLE, ENGLAND.

Our author recommends a *long sea voyage* in phthisis pulmonalis, and prefers the Australian one.

But a sea voyage is a rough remedy, and it cannot be expected that it will be beneficial in every case. To send away a patient who is in the last stage of phthisis, with night sweats, diarrhœa, and cavities in the lungs, is only cruelty; to hope even to survive the remedy, he must be able to stand some fatigue, to bear even some further reduction in strength without being brought to a stage from which there is no return; for the possibility of seasickness at the outset must be considered; or even without this—for, strange to say, phthisical patients often escape it—there is change of mode of life, and probability of stormy weather, to be taken into account, and there is the chance of detention in the tropical calms, which produce loss of appetite, profuse perspiration, and often diarrhœa.

The cases which offer the best prospects are those in which the patient undertakes the voyage before pulmonary alteration is far advanced; and especially when, in addition to close confinement, long hours at business, or close application to mental work seems to have been a predisposing cause of the illness; also those in which the progress of the disease is very slow, which improve during a favorable, and grow worse during an unfavorable season, year after year. When the infiltration of the lung is localized and chronic, when it is confined to the one side, and there is absence of evidence of disease elsewhere, it may be looked on as a favorable case, and the further the departure from this condition the less are the patient's chances of benefit. It is stated that cases in which hæmoptysis is the first, or at least a very early symptom, do especially well. Cases are unsuitable for a voyage, in which there are signs of extensive progressive excavation, and all in which there is great muscular weakness. When we have evidence of the disease being general, as shown by glandular, bowel or laryngeal disease, our recommendation should certainly be withheld. The bowels in particular should be in good trim, for the sedentary life and peculiar diet of a ship are apt, in healthy people, to produce intestinal disturbance (constipation and subsequent diarrhœa, or *either* of these alone). In a case which persistently grows worse ~~under~~ favorable circumstances of habitation, etc., on shore, the ~~prospect~~ of benefit would be small. A phlegmatic habit of body

should also be looked upon, to a considerable extent, as a counter-indication for this remedy. While speaking on this part of the subject, it is to be borne in mind that during its early stage phthisis is a curable, perhaps a very curable disease, under proper treatment. In its later stages it is cured with difficulty, and a sea voyage does not seem in any degree to lessen this difficulty.

A. MALET, M. D., RIO DE JANEIRO.

Our author gives (*Bulletin Generale de Therapeutique*, August 30th, 1868), in the therapeutics of pulmonary phthisis, the preference to the *iodide of calcium* in all cases not of syphilitic origin. He does not claim it as a specific, but says it awakens the appetite, regulates the digestion, renders the respiration freer and deeper, diminishes the cough and modifies the expectoration, increases the strength and lessens the perspiration. If constipation ensue in consequence of its long use, it will often disappear of itself; otherwise the dose may be diminished, or the remedy temporarily stopped. He gives the iodide of calcium in a simple aqueous solution, to be taken at meal-times. Not more than eight grains of the salt should be given, in divided doses, during the day. A larger amount than this does harm.

DRS. MONTARD MARTIN AND HÉBARD, PARIS.

447. B. *Acidi arseniosi*, gr.j.

For 60 granules. Seven or eight a day, of these granules, to be taken at first, the dose to be speedily carried up to ten or fifteen. Never more than two should be given at a time, and they should be administered as often as possible before meals. The treatment should be suspended from time to time.

Researches have shown the entire harmlessness of arsenic, when properly employed, as well as its undeniable efficacy in certain forms of tubercular phthisis. Almost all the patients, after a few days' treatment, exhibited a marked improvement in their general condition. The appetite improves, the strength returns, the complexion is clearer, and the eye is more animated; and at the end of three weeks or a month flesh begins to be gained. The local malady undergoes less change; but even this is sometimes sensibly modified. The most favorable cases are those in which there is no acute fever or serious digestive disturbance. M. LOLLOIT, the most recent observer, finds that the daily administration of one-tenth of a grain produces a diminution of temperature, and a very notable diminution in the amount of urea.

451. R. Morphisæ sulphatis, gr. j
Syrupi ferri iodidi, f. ʒss
Glycerinæ, f. ʒijss. M.

A teaspoonful two or three times a day, to quiet the cough and retard the emaciation in phthisis.

THOMAS HAWKES TANNER, M. D., LONDON.

452. R. Ferri iodidi, gr. vj-xvij
Glycerinæ, f. ʒij
Infusum calumbæ, ad. f. ʒvj. M.

Two tablespoonfuls three times a day.

In strumous ulcers, etc., where the stomach will not tolerate cod-liver oil, the above is useful.

453. R. Ammonii iodidi, gr. j-vj
Infusi cinchonæ flavæ, f. ʒss. M.

For one dose, to be taken twice or thrice daily, before food. Very valuable in strumous enlargement of the absorbent glands. The dose is to be graduated according to the patient's age. At the time the medicine is given internally, the following ointment should be rubbed into the swelling night and morning :—

454. R. Ammonii iodidi, ʒj
Adipis, ʒj. M.

In cases of phthisis where the stomach will not tolerate any form of cod-liver oil, resort may be had to *cod-liver oil embrocations* :—

455. R. Olei morrhuæ, f. ʒijss
Spiritus ammoniæ aromatici, f. ʒj
Tincturæ opii, f. ʒss
Olei lavandulæ, ℥xxx. M.

One-half to be rubbed over the chest and abdomen, night and morning.

Or,

456. R. Olei morrhuæ, f. ʒj
Olei cajuputi, f. ʒj. M.

To be rubbed over the chest at bedtime, and applied by means of lint well saturated with it. The cajuput oil well disguises the smell of the embrocation.

457. R. Ferri ammonio-sulphatis, ʒss-ʒj
Aquæ destillatæ, f. ʒvj. M.

Two tablespoonfuls every six or eight hours, in cases where, on account of hæmoptysis, an astringent preparation of iron is indicated.

458. R. Liquoris potassæ, f. ʒij
Tincturæ cinchonæ compositæ, f. ʒvj
Decoctum cinchonæ flavæ, ad. f. ʒvj. M.

Two tablespoonfuls twice or thrice daily.

Often beneficial in the early periods of the disease. But it is a less favorite remedy with our author than,

459. R. Spiritus ammoniæ aromatici,
 Spiritus chloroformi, aa f.ʒvij
 Morphisæ muriatis, gr.ʒ
 Extracti cinchonæ fluidi, f.ʒss
 Tincturam cinchonæ, ad. f.ʒiij. M.
- One teaspoonful in a wineglass of port wine, three times a day.

In certain cases of phthisis this mixture is very useful, especially in conjunction with cod-liver oil and a liberal diet.

If the *night sweats* weaken and annoy the patient, they may be treated with,

460. R. Acidi gallici, ʒij
 Extracti cannabis indicæ, gr.v
 Confectionis rosæ, gr.x. M.
- For 10 pills. One to be taken every night at bedtime.

Or,

461. R. Zinci oxidi, gr.xij
 Extracti conii,
 vel,
 Extracti hyoscyami, gr.xviij. M.
- For 6 pills. One to be taken every night at bedtime.

For the relief of night sweats in phthisis and other exhausting diseases, there are few remedies more serviceable than the foregoing.

SYMES THOMPSON, M. D.

The *tincture of the chloride of iron* is far superior to other chalybeates. The improvement of appetite, diminution of flatulence, etc., which occur under its administration, are often remarkable, cod-liver oil and other fats, refused previously, being digested without discomfort. It both checks diarrhœa and relieves constipation, by giving tone to the feeble muscular fibres of the bowels; it lessens night sweats, though these often call for oxide of zinc in addition, and is a valuable remedy in hæmoptysis (*Practitioner*, September, 1868).

JOHN C. THOROWGOOD, M. D., LONDON.

462. R. Sodii hypophosphitis, gr.v
 Glycerinæ,
 Aquæ, aa f.ʒss.
- For one dose, thrice daily.

In addition to Dr. THOROWGOOD, Drs. C. J. B. WILLIAMS and C. J. WILLIAMS (the latter one of the physicians at the Brompton Hospital), speak of the value, in phthisis, of the *hypophosphites*,

secretion from the tubes, and has occasionally appeared to improve the constitutional state. The inhalation of warm water, impregnated with emollient herbs, such as *althæa officinalis*, or with narcotic extracts, palliates cough, dryness of throat, and laryngeal irritation. Inhalations of *tar*, *creosote* and *carbolic acid*, simple, or in association with sedative extracts, have occasionally produced remarkable improvement in the local and constitutional state.

A palliative influence appears to be exercised in the early stages by the *mineral waters* of Ems, Oeynhausen, Eaux-Bonnes, St. Sauveur, and Canterets. But Eaux-Bonnes should be avoided when there is hæmoptoic tendency.

A *sea-voyage*, more especially in the case of young adult males, will occasionally work more effectual change in the phthisical organism than any other single influence, or any combination of influences. Not only is the local disease in some cases stayed, and the damaged lung restored to the maximum of possible repair, but the whole constitution undergoes such remodeling, as to render a fresh outbreak of the tuberculizing process an unlikelihood.

For the influence of *climate* upon phthisis, see further on, in the section on Climate for Invalids.

C. J. B. WILLIAMS, M. D., LONDON.

The following directions for the administration of *cod-liver oil* in phthisis are useful (*Lancet*, July 4th and August 15th, 1868):—1. The *best time* for administering it is immediately after, or to those who prefer it, at or before a solid meal. 2. In cases of *peculiar weakness* of *stomach*, with tendency to retching or vomiting, strychnia (gr. $\frac{1}{4}$ – $\frac{1}{2}$) proves a most valuable adjunct. So does salicine. Neither of these, though a powerful tonic, has any of the heating properties of quinine or iron. If their bitter taste is objected to, they may be given in the form of pill, after or before the oil. 3. It may be advantageously *combined with a mineral acid*. Nitric acid is best in inflammatory cases, and in those attended with much lithic deposit in the urine, but its tendency to injure the teeth is an objection to its long-continued use. Sulphuric acid is more eligible where there is liability to hæmoptysis, profuse sweats, or diarrhœa. But in most cases, for long continuance, diluted phosphoric acid is preferable to either. 4. The *bulk of the whole dose* of the oil and vehicle should be so small that it may be swallowed at a single draught; therefore, the vehicle should not exceed a tablespoonful, with at first a teaspoonful of the oil, to be

gradually increased to a tablespoonful. 5. The *dose* of the oil should rarely exceed a tablespoonful, twice or thrice daily. Larger quantities either derange the stomach or liver, or some of it passes unabsorbed by the bowels. 6. The *diet* requires attention. With some persons the oil agrees so well, and so much improves their digestive powers, that they require few or no restrictions in diet, but this is not the case with the majority. The richness of the oil proves more or less a trial, sooner or later, to most persons; therefore, it becomes proper to omit or reduce all other rich and greasy articles of food. All pastry, fat meat, rich stuffing, etc., should be avoided, and great moderation observed in the use of butter, cream, and very sweet things. Even new milk in any quantity is not generally well borne during a course of oil, and many find malt liquor too heavy, increasing the tendency to bilious attacks. A plain nutritious diet of bread, fresh meat, poultry, game, with a fair proportion of vegetables, and a little fruit, and only a moderate quantity of liquid at the earlier meals, commonly agrees best. 7. Should a bilious *attack* come on, indicated by nausea, headache, furred tongue, offensive eructations, high-colored urine, etc., it is necessary to suspend the oil, lighten the diet, and give blue pill or calomel, with an aperient on alternate nights, and an effervescing saline twice or thrice during the day. In a few days, when the attack has passed off, the oil may be resumed, beginning with small doses, as at first. 8. In all cases, during the use of the oil, the *bowels* should be kept regular in action, and if this cannot be done by regularity of habit and diet, it should be effected by the use of a mild daily pill of rhubarb or aloes. 9. According to Dr. RINGER, the *taste* of the oil is removed, and nausea often prevented, by a little salt taken immediately before and after the oil.

CONSUMPTION HOSPITAL, LONDON.

463. R.	Morphiæ muriatis,	gr. ss	
	Acidi hydrocyanici diluti,	℥ xv	
	Acidi muriatici diluti,	℥ ijss	
	Oxymellis scillæ,	f. 3ss	
	Aquæ,	q. s. ad. f. 3j.	M.
Dose—One to two drachms.			

RÉSUMÉ OF REMEDIES.

Acidum Carbolicum. The inhalation of pulverized solutions of carbolic acid are of frequent benefit in the advanced stages of phthisis, by diminishing the secretion and lessening the cough and exhaustion, and by correcting fetor of the expectorations. A solution of drops xv-xx, in two pints of water, with the addition of one or two ounces of tincture of conium, or of alcohol, may be used (*See Inhalations*, p. 192).

Acidum Tannicum. Prof. STILLÉ says that this medicine appears sometimes to remove the crepitating rhonchi so generally observed around crude tubercles at the apex of the lung during the first stage of phthisis, while it diminishes the dyspnoea, cough and expectoration. At a late period, it sometimes so manifestly palliates all the symptoms as to inspire a belief that a cure has been accomplished, converting moist rhonchi, or gurgling, into signs of solidification merely, or of a dry cavity. The value of such an influence should not be underrated, for it is in the highest degree probable that the extension of tuberculous deposits is preceded by a congested state of the pulmonary parenchyma, and that by restoring the latter, we may prevent the former. The more nearly the disease resembles the acute form of phthisis, the less appropriate will the medicine become.

Æther has been recommended to promote the assimilation of cod-liver oil, by Dr. FOSTER (F. 434). The objections to his preparation are its disagreeable taste, and the eructations it occasions.

**Alcohol*. Dr. ANSTIE says that there is a variety of pulmonary phthisis, especially common in persons with delicate skin and slight frame, with marked tendency to colliquative sweating, and a notable inability to assimilate either ordinary food or fatty matter of any kind, in which the tolerance for large and long-continued doses of alcohol is very remarkable, and the benefit produced by such treatment very great. Prof. FLINT also recommends strongly the alcoholic treatment in cases in which stimulants are well borne. M. FURTER recommends strongly diluted alcohol with raw mutton or beef (F. 435, 436). Wine may be given in the form of enema; it should be diluted with water, and care taken not to overload the bowels.

Ammonii Iodidum is recommended in incipient phthisis, by Dr. RICHARDSON. It is also advised by Dr. TANNER, in cases in which cod-liver oil is not tolerated (F. 453).

**Arsenicum* is often a remedy of great value, but it is frequently badly borne by the stomach. Prof. DA COSTA recommends it as often beneficial in slow consumption (F. 430, 431). It is highly advocated by a number of French physicians (pp. 177, 181).

Calcii Iodidum has been recommended (p. 181).

Calcei aqua and milk is highly spoken of, by Dr. T. K. CHAMBERS and others, as an ordinary beverage in phthisis.

Cetraria has been much praised, not only as a nutrient, but as an expectorant, in consumption.

Cimicifuga has considerable reputation in the treatment of phthisis, but Prof. STILLÉ considers the cases reported as benefited as probably chronic bronchial affections.

Cinchona. The acidulated cold infusion of bark is an excellent remedy for the profuse perspiration, night sweat and hectic fever.

Digitalin has been recommended, but no decided results have been reported.

Digitalis enjoyed formerly a higher reputation than it now possesses, although it is still highly spoken of. Dr. NIEMEYER considers it, in combination with quinine, as an admirable agent for arresting the abnormal calorification. (F. 448). It is often very useful in hæmoptysis, especially in the advanced stages of the disease (F. 398.)

Ferri Ammonio-sulphas is useful where, on account of hæmoptysis, an astringent chalybeate is indicated (F. 457).

Ferri Bromidum is sometimes prescribed.

**Ferri Chloridi Tinctura* is regarded by many as decidedly the best form of iron in phthisis (Dr. SYMES THOMPSON, p. 185).

**Ferri Iodidum*, alone or with cod-liver oil, is an excellent remedy, especially in the early stages of the disease (F. 451, 452).

Ferri Mistura Composita is much used in England, in phthisis, especially when much debility and anæmia exist. If, however, it induce headache, nausea, and heat of skin, it must be discontinued.

Ferri et Potassii Tartras is often a useful chalybeate in phthisis, as it is easily assimilated, non-astringent, and may be prescribed with alkalies, which are so frequently indicated in this disease, on account of undue acidity of the stomach.

Ferri Vinum is highly recommended, especially for children and young persons, given with, or immediately after meals.

* *Gallicum Acidum* is useful for checking the diarrhoea, excessive expectoration, hæmorrhage and profuse perspirations in this disease.

Glycerine is said, by Dr. WALSHE, to often agree well when cod-liver oil is unbearable, and then, especially in children, to decidedly increase the weight. It may be given in combination with the syrup of the iodide of iron.

Hydrogenii Peroxidum is said to greatly improve digestion in the first stage of phthisis, and aid the action of iron; in the last stage, it unquestionably affords relief to the breathlessness and oppression, acting like an opiate without producing narcotism.

* *Hypophosphites*. (The principal "alkaline hypophosphites," are those of soda, potash and lime). These remedies were introduced by Dr. J. F. CHURCHILL, of Paris, as *curative* in every stage, but the word *palliative* better designates their action. They are of late less employed, but are still highly recommended by a number of authorities (F. 422, 427, 432, 462). In some cases, when tubercular softening has commenced, they are alleged, by several practitioners, to act prejudicially.

Iodinum as an internal remedy, has been almost entirely displaced by cod-liver oil, though the action of the latter has been attributed, in part, to the small quantity of iodine it contains.

** *Morrhua Oleum* is deserving of the highest confidence. The earlier it is employed in the disease the better (F. 289, 303, 304, 310). In regard to its mode of action and method of administration, see opinions of Dr. AITKEN (p. 169), of Prof. DA COSTA (p. 174), of Dr. FOSTER (p. 176), of Prof. JACCOUD (p. 178), of Dr. NIEMEYER (p. 182), of Dr. WALSHE (p. 186) and of Dr. C. J. B. WILLIAMS (p. 188). For manner of disguising its taste, see Index of Remedies.

Muriaticum Acidum, alone or in combination with other mineral or vegetable tonics, is an important auxiliary to treatment.

Opium, by the mouth or enema, is often a valuable palliative in advanced stages of phthisis, to relieve the cough, lessen the expectoration, check diarrhoea, and afford comfort to the patient.

Oxygen inhalations seem to possess the power of promoting the digestion of cod-liver oil, and, therefore, often of great service (see Inhalations).

* *Pancreatic Emulsion*, introduced by Dr. HORACE DOBELL (p. 110), is an excellent remedy, either with or without cod-liver oil, and is well borne by persons unable to retain the oil. For method of administration (see p. 175).

* *Pancreatine*, introduced by Dr. HORACE DOBELL, is highly recommended (p. 175).

Phosphorus has been employed, but possesses no special value.

Plumbi Acetas is very useful in diminishing expectoration, checking hæmorrhage and diarrhoea, and to a less extent, the profuse perspirations of phthisis, but its administration is objectionable, because of the anorexia which often speedily results.

Potassii Chloras is recommended in the painful deglutition of advanced phthisis (F. 449).

Potassæ Liquor is sometimes prescribed (F. 458).

Potassii Iodidum is of value, given with iron and cod-liver oil, when there is a syphilitic taint.

Prunus Virginiana improves the appetite and palliates the cough.

Quiniæ Sulphas is a valuable tonic in phthisis, given in conjunction with iron and cod-liver oil.

Saccharum. Dr. SYMONDS recommends (*British Medical Journal*, June 13th, 1868) sugar as an article of diet in phthisis, taken to the extent of a quarter of a pound or more daily. He regards it, with eggs, a succedaneum for cod-liver oil, when the latter disagrees.

Sanguinaria has been advised in protracted catarrhal affections assuming the character of incipient phthisis. Small doses of the tincture should be given for several weeks.

Serum Præparatum. Suet is a popular and useful remedy, boiled in milk, and taken in the morning.

Sodii Chloridum has been recommended, but has probably no direct influence on the disease when fully developed. It is useful in hæmoptysis.

Sodii Sulpho-carbolas has been recommended by Dr. SANSOM (*Practitioner*, July, 1869).

Sulphur is useful in the costiveness of phthisis, and may also be employed against profuse perspirations.

Tarazacum is often serviceable, from its power of diminishing abdominal plethora.

Zinci Oxidum is strongly recommended, by Dr. WARING CURRAN, as steadying the nervous system and acting as a general sedative (F. 419).

INHALATIONS.

Arsenicum. TROUSSEAU and others have recommended arsenious fumigation by means of cigarettes—a mode of treatment which should be conducted with caution.

Carbolicum Acidum. Dr. MARCET recommends (*Practitioner*, November, 1868) the atomization of the following solution:—

464. R. Acidi carbolici, gr. ss-iss
Aquæ, f. ʒj. M.

This inhaled in the form of spray acts beneficially in the first stages of the disease, by improving the circulation in the lungs, but in the advanced stages it should be withheld.

Chloroformum. A few whiffs (m.vj-x) are often useful in the cough and dyspnoea of phthisis, but the effect is only temporary.

**Iodinium*. In cases of troublesome cough and abundant expectoration, benefit sometimes results from employing, night and morning, vapor iodine.

465. R. Tincturæ iodinii, f. ʒj
Aquæ, f. ʒj. M.

Apply gentle heat, and let the vapor that arises be inhaled. Or, the dilute compound tincture of iodine may be atomized.

Iodoformum. The inhalation of the dilute vapor obtained by mixing iodoform with starch, spreading it on paper and allowing it to volatilize, has been recommended.

Opium, by inhalation, is an excellent means of soothing irritative cough.

Oxygen inhalations can only be looked upon as palliative, and seem, in some cases, after affording immediate relief, to invite fresh and more intense exacerbations.

Piz Liquida. Tar vapor is now little used, having lost the reputation it once enjoyed in phthisis.

EXTERNAL REMEDIES.

Aceticum Acidum Dilutum. The application of diluted vinegar to the chest and upper part of the body, to allay the profuse perspirations of phthisis, is recommended by Dr. WALSHE, Sir C. SCUDAMORE, and others, as a measure greatly conducing to the comfort and well-being of the patient. The mixture of one part of vinegar, one of eau de cologne, and two of water, is employed by Sir C. SCUDAMORE.

Ammonii Iodidum, in ointment, is recommended by Dr. TANNER (F. 319).

Baths. The *Turkish Bath* is sometimes of service in incipient phthisis. The *Compressed Air Bath* may often be employed with great advantage.

Cod-liver Oil embrocations may be employed when the stomach will not tolerate the oil (F. 320, 321).

Counter-irritation. The counter-irritants most frequently resorted to in phthisis are the following: *Aqua ammoniæ*; *Tartar Emetic Ointment*; *Calomel and Iodine Ointment* (F. 283); *Croton-oil Liniment*. **Tincture of Iodine* (painted over the chest every night) also does good, by the iodine which is inhaled, from the air around the patient being slightly impregnated by the evaporation of the tincture; *Burgundy Pitch Plaster*; the following plaster is recommended by Dr. BARLOW, in the first stage of phthisis:—

466.	R.	Emplastri picis com.,	ʒiiss	
		Antimonii et potassæ tartratis,	gr.x.	M.

Make a plaster.

Setons (in the early stages a sub-clavicular seton of three or four silk threads sometimes retards the progress of the disease).

THE ANÆMIA OF.

Ferri Iodidum is one of the best chalybeate tonics which can be employed in the anæmia of phthisis, if it do not prove too stimulating. The syrup (℥xx-f.ʒj, thrice daily) is the best form.

THE APHTHÆ OF.

Catechu. The infusion makes an excellent gargle in aphthæ occurring in the advanced stages of phthisis.

Potassii Chloras, with morphia, glycerin, and syrup, is recommended for redness of the tongue, etc.

**Sodii Biboras*. Sir T. WATSON recommends the mel boracis.

THE CONSTIPATION OF.

Ferri Chloridi Tinctura sometimes relieves constipation in phthisis, by giving tone to the feeble muscular fibres of the bowels.

**Podophyllin* often gives better results than any other purgative.

472. R. Hydrargyri chloridi mitis, gr.xviii
 Pulveris opii, gr.ij
 Syrupi, q. s. M.

Divide into 12 pills. Take one every half-hour, until all are taken. At the same time rub *mercurial ointment* into the skin of the affected side, near the axilla, every fourth hour. The amount of opium may be increased if the pain is very acute.

Or,

473. R. Hydrargyri chloridi mitis, gr.xij-xxiv
 Pulveris digitalis, gr.vj
 Pulveris opii, gr.vj-xij
 Syrupi, q. s. M.

Divide into 12 pills. One to be taken every three or four hours, and the whole side to be covered with a piece of linen spread with *mercurial ointment*, over which is to be placed a poultice covered with oil silk.

The patient must be carefully watched that neither *ptyalism* nor *narcotism* be produced. The moment mercurial action has been established, the further administration of the mineral must cease.

Opium and digitalis are advised to be continued after the use of calomel has been suspended. With these may be given two grains of *squills* or of *nitrate of potassium*, which will act beneficially as a diuretic. After twelve or more hours very small quantities of *tartar emetic* in solution may be given at night, combined with small doses of *opium* and *ipecacuanha*, to allay the cough and general irritation.

After the febrile action has in some measure subsided, and the active stage of the disease is at an end, a *blister* may be applied over the lateral region of the chest, but not over the seat of pain; and if the fluid continues to accumulate, the blisters ought to be repeated, so as to maintain a surface at a distance from the affected part in a constant state of counter-irritation. Diuretics ought, at the same time, to be given freely. The *compound tincture of iodine*, in doses of *twenty minims*, *freely diluted*, is a valuable medicine at this juncture.

PROF. ROBERTS BARTHOLOW, M. D., CINCINNATI, OHIO.

474. R. Morphiae sulphatis, gr.xvj
 Aquæ destillatæ. f.℥j. M.
 Dissolve and filter. Dose, for a hypodermic injection, five to ten minims.

Nothing can be more satisfactory than the treatment of *pleurisy* in its early stage by the hypodermic injection of morphia. It re-

PLEURISY, ACUTE.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

In acute pleurisy, during the first stage, or that of *hyperæmia*, the best practitioners of all times and of all countries have taken blood from the arm, provided the strength be good and the symptoms sthenic. If, says LÆNNEC, after one or two bleedings the pain in the side and fever have not abated, blood should be taken from the side by leeches or cupping. The practitioner should also remember that effusion often takes place after the bleeding, during the subsidence of the inflammation, so that the breathing is often more oppressed, and the symptoms for a time aggravated, although the condition of the patient is in reality improved. The lung, however, soon gets accustomed to this new state of things; and the fluid in a few hours beginning to be absorbed, the symptoms are generally ameliorated. The patient should be bled in an upright posture, in a full stream, until he can take a deep breath freely, or faints—from ten to twenty ounces.

Hot poultices and *leeches* should always be employed when pain on inspiration is present, of a “catching” or “stabbing” nature.

Tartar emetic, says LÆNNEC, is, in general, well supported in pleurisy, and contributes powerfully to subdue the inflammatory tendency; but, nevertheless, when the pain in the side and fever have ceased, it loses further power over the disease; at least, it does not appear to promote the removal of the fluid effused, so that its use must generally be abandoned as soon as the acute symptoms have passed away.

Blisters are not to be used until the acute stage is past; but when the pain has ceased for some days, and absorption proceeds slowly, and the disease promises to become chronic, a succession of blisters may be applied.

After free evacuation of the bowels has been effected, *calomel*, to the extent of producing the *slightest* mercurialization, is the most beneficial line of treatment in certain cases *only*—those which do not acknowledge any *constitutional diseases* as their cause. The more rapidly slight mercurialization can be produced the better; hence the following prescriptions are useful:—

PLEURISY, CHRONIC.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

477. R. Pulveris digitalis,
 Pulveris scillæ,
 Pilulæ hydrargyri, ss gr. iss. M.

For one pill, two or three times a day, as a diuretic in chronic pleuritis with effusion.

Also,

478. R. Hydrargyri chloridi corrosivi, gr. iv
 Tincturæ iodinii compositæ, f. ʒiv-vj
 Glycerinæ, f. ʒiij
 Aquæ destillatæ, f. ʒivss. M.

For a lotion, to be applied over the chest by spongio-piline, or by lint covered with oiled silk.

One or other of the following ointments may also be rubbed in upon the skin, over the side of the chest, namely:—

479. R. Hydrargyri chloridi corrosivi, gr. iv-v
 Unguenti iodinii compositæ, ʒiv-vj
 Adipis, ʒiv-ʒj. M.

Or,

480. R. Hydrargyri chloridi corrosivi, gr. iv-v
 Potassii iodidi, ʒj
 Aquæ destillatæ, q. s. to make solution.
 Adipis, ʒj. M.

Make an ointment.

DR. CRUVEILHIER, FRANCE.

481. R. Tincturæ aloës, f. ʒj-ij
 Tincturæ scillæ,
 Tincturæ digitalis, ss gtt. xx. M.

To be taken every two or three days, in the morning, on an empty stomach, in a small glass of a diuretic infusion. Used in chronic pleurisy with effusion. Flying blisters on the chest.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

482. R. Potassii iodidi, ʒj
 Extracti pruni virginianæ fluidi, f. ʒj
 Spiritus juniperis compositi, f. ʒiij. M.

A tablespoonful thrice daily.

483. R. Potassii acetatis, ʒj
 Tincturæ digitalis, f. ʒij
 Extracti cinchonæ fluidi, f. ʒj
 Aquæ, f. ʒij. M.

A teaspoonful thrice daily, in pleuritic effusions.

484. R. Potassii iodidi, ʒij
Tincturæ scillæ, f.ʒvj
Tincturæ opii camphoratæ, f.ʒiiss
Misturæ acaciæ, f.ʒvj. M.

A teaspoonful four times a day, in chronic pleurisy with consolidation of the lung. Also, a good nourishing diet; either whisky or gin, half an ounce three times a day; and counter-irritation by means of tincture of iodine.

Afterward, when effusion has begun to disappear, the following tonic diuretic may be ordered:—

485. R. Tincturæ ferri chloridi, f.ʒj
Acidi aceticæ, f.ʒj. M.

And add:—

486. R. Liquoris ammonii acetatis, f.ʒv
Syrupi aurantii corticis, f.ʒij. M.

A dessertspoonful increased to a tablespoonful, thrice daily.

487. R. Potassii iodidi, Div
Potassii acetatis, ʒss
Elixiris cinchonæ, f.ʒiiij
Curagao, f.ʒj. M.

A dessertspoonful thrice daily, in pleuritic effusion, with roughening above effusion. Also a blister and an occasional cathartic.

NÉLIGAN.

488. R. Iodinii, ʒijss
Potassii iodidi, ʒj
Camphoræ, ʒss
Alcoholis, f.ʒij. M.

Dissolve successively, in the alcohol, the iodine, the iodide and the camphor. A counter irritant liniment, to be employed in pleurisy with effusion, with caution, however, on account of its energetic vesicant powers. Useful when the action upon the kidneys of a cantharidal vesicant is feared.

THOMAS HAWKES TANNER, M. D., LONDON.

489. R. Pilulæ hydrargyri, gr.ijj
Pulveris digitalis, gr.ss
Pulveris scillæ, gr.iss. M.

For one pill. To be taken as an alterative and diuretic, two or three times a day. (The dose in this pill differs somewhat from the same combination given by Dr. AITKEN. F. 339).

Very often, however, mercury in any shape does harm. Then the compound tincture of iodine, the iodide of iron, or cod-liver oil, is much more likely to be useful.

The patient ought to be kept on a moderate diet, free from stimulants. A series of flying blisters may be applied. Purgatives as well as diuretics should be administered.

CHARLES WEST, M. D., LONDON.

490. R.	Potassii iodidi,	gr. xij	
	Potassii nitratis,	gr. xxx	
	Spiritus ætheris nitrosi,	f. ʒj	
	Tincturæ scillæ,	℥. xxx	
	Tincturæ digitalis,	℥. xxiv	
	Syrupi aurantii corticis,	f. ʒss	
	Aquam,	ad. f. ʒiv.	M.

Tablespoonful every four hours, for a child six years old.

Employed in the treatment of pleuritic effusion, and continued steadily for several days. Its action may be seconded by a small dose of mercury given once or twice a day, as one grain of calomel, or three of gray powder. The mercury may be discontinued at the end of a week, but the iodide of potassium may be persevered with for two or three weeks.

RÉSUMÉ OF REMEDIES.

Digitalis is sometimes given, combined with squill and mercury, in chronic pleuritic effusion (F. 339, 349).

Hydrargyrum. Blue pill is sometimes useful, combined with digitalis and squill (F. 279, 249).

Oleum Morrhuæ, conjoined with iron and tonic regimen, is of benefit in pleuritic effusions associated with debility.

Potassii Acetas is, in some cases, prescribed by Prof. DA COSTA (F. 483).

Potassii Iodidum, variously combined according to indications, is of the highest value in restraining inflammatory action and promoting absorption (F. 343, 345, 348, 350).

Quinæ Sulphas, in the advanced stages, when the case assumes a typhoid character, especially when the patient is old or debilitated, is of great service.

Scilla is sometimes given, combined with digitalis and mercury (F. 239, 249).

Diuretics are, of course, indicated in chronic pleuritic effusions. The principal drugs employed are *Digitalis*, combined with squills and mercury (F. 239, 249), with acetate of potash (344), or with iodide of potassium (F. 350); *Ferri Chloridi Tinctura* (F. 346); *Potassæ Acetas* (F. 337, 344, 348); *Potassæ Nitrates* (p. 130); *Scilla* (F. 339, 345, 349).

EXTERNAL REMEDIES.

Cantharis Blisters may be employed with manifest advantage.

Counter-irritants are of service. The principal employed are *Aqua Ammoniac*; *Hydrargyri Chloridum Corrosivum*, combined with iodine (F. 340, 341, 342); **Tincture of Iodine*.

PNEUMONIA.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

491. R. Antimonii et potassii tartratis, gr. iij-xij
 Hydrargyri chloridi mitis, gr. xij. M.

For 12 pills. One to be given every five or six hours, according to the severity of the disease.

This combination is believed to have saved a much larger number of cases than antimony alone. It is to be adopted in some cases. The bowels should be well cleaned out before resorting to it. So soon as the gums are touched, the prescription should be discontinued.

PROF. BOUCHUT, PARIS.

492. R. Veratriæ,
 Pulveris opii, ℥ss gr. iiss
 Pulveris ipecacuanhæ, gr. iij
 Syrupi, q. s. M.

For 20 pills. From one to five to be taken during the day.

PROF. HARVEY L. BYRD, M. D., BALTIMORE.

493. R. Potassii bromidi, 3j.
 Make 12 powders. One powder every two hours, and between each dose, as long as necessary to keep down activity in the circulation, two drops of Flemming's tincture of aconite.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

494. R. Potassii iodidi, ℥iv
 Tincturæ cinchonæ compositæ, f. 3iv. M.

A dessertspoonful thrice daily, in subacute pneumonia with pleurisy.

Also,

357. R. Emplastri cantharidis, 4x5 in.
 To be followed by a poultice and dressed with basilicon ointment.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

495. R. Quiniæ sulphatis, ʒj.

For 10 pills. One every two hours.

According to experiments of our author in the administration of quinine in this disease, it is called for when there is great danger, arising chiefly or entirely from excessive elevation of the temperature of the body. It may then be given as above, or in two or three ten-grain doses within a few hours.

JOHN POPHAM, M. D., CORK.

496. R. Potassii bicarbonatis, 3j-vj
 Misturæ acaciæ, f. ʒiij. M.

A dessertspoonful in water, four, six or eight times in the twenty-four hours.

The evidence of the good effects of this alkaline treatment appears on the second or third day (*British Medical Journal*, December 28th, 1869). It acts as a sedative by allaying the cough and abating the state of congestion on which it depends. A blister applied for four or six hours, but not for suppuration, is a valuable auxiliary. Suppuration from blistering is exhaustive and prejudicial.

A. T. H. WATERS, M. D., LONDON.

Our author is opposed to the prolonged administration of *tartar emetic* in small doses. There are very few cases that are not injured by such a practice, and whenever the dose produces a depressing effect, or whenever it gives rise to sickness or purging, it does harm, and should not be persevered with. At the same time, there can be no doubt that large doses (gr. j-ij) may be safely given in some cases, and continued even for days, without producing its physiological effects—vomiting, purging, etc., and in such instances the antimony appears to do good; the symptoms of the pneumonia yield during its administration, and convalescence becomes established. But whilst these full doses of tartar emetic are well borne by some patients, it is doubtful whether it is ever desirable to exhibit them, for I believe we can get all the good effects which the drug is capable of affording, by using it in smaller quantities. The treatment employed by Dr. W., with a loss of only one case in forty-four, consisted mainly (apart from the occasional use of antimony, as above) of *carbonate of ammonia*, combined with *chloroform* (F. 501), *chloric ether*, *opium*, a *generous, nutritious diet*, beef tea, milk, etc., with the judicious use of *alcoholic stimulants* from an early period. *Turpentine stupes*, *sinapisms*, and *linseed meal poultices* were employed in the early stages of the disease, and *blisters* in the more advanced.

Dr. W. considers that too high a value has been placed upon *mercury* as a remedy in the stage of hepatization, for which it has been considered peculiarly applicable. He finds that in these cases it possesses no special properties for promoting absorption of

Cinchona. See Quiniaz Sulphas.

Digitalis has been much employed of late years. M. RONY-SAUCEROTTE regards it (*Practitioner*, March, 1869) as one of the best means of relieving the febrile and other grave symptoms; less active as an antipyretic than veratrum, but more easily managed and less offensive; acting more slowly than leeches, but producing more durable results.

Hydrargyri Chloridum Mite was formerly regarded as indispensable, combined with ether, antimony or opium, in the treatment of pneumonia. Although still employed, it is very much less so of late years.

Ipecacuanha is sometimes serviceable as an expectorant and diaphoretic, but is not to be trusted to alone, nor continued when it nauseates and prevents the patient from taking nourishment.

Moschus, in doses of gr.xxiv-xxx daily, has been recommended when pneumonia assumes a typhoid character, particularly if attended with delirium.

**Opium* is frequently a valuable remedy in arresting delirium, relieving pain and cough, and inducing sleep.

Plumbi Acetas is highly recommended in *asthenic* pneumonia, occurring in debilitated subjects. It may be combined with quinine (gr.j of each every two hours), or, if the cough be very violent, opium may replace the quinine.

Potassia Liquor, in doses of ℥x-xv, added to an ordinary expectorant mixture, is often beneficial in the advanced stages of pneumonia when the sputa is scanty, thick and viscid.

Potassii Bromidum is prescribed by Prof. BYRD (F. 493).

**Potassii Iodidum* is frequently useful, combined according to circumstances, in the advanced stages of pneumonia (F. 494).

Potassii Nitras has been recommended.

**Quiniaz Sulphas* is of the highest value in *asthenic* pneumonia, and in the advanced stages of pneumonic inflammation of the old and debilitated. Under the administration of gr.v every third hour, the pulse becomes slow and steady, and the respiration free. If the patient be young, with evidences of capillary congestion generally over the system, local depletion should precede its use. Dr. Niemeyer recommends quinine (F. 495) when there is great danger, arising from excessive elevation of the temperature of the body.

Sanguinaria is recommended in *typhoid* pneumonia, when respiration is very difficult, the extremities livid, and the pulse full, soft and compressible. The dose should be large in proportion to the violence of the disease, and repeated until it excites vomiting or relieves symptoms.

**Senega*, in decoction, is recommended by Dr. O. J. B. WILLIAMS, when the inflammatory symptoms have subsided, and any amount of debility, with weak pulse, cool skin, cough, and dyspnoea remains. Cases which have resisted other remedies, often almost immediately improve by its use, the pulse becoming slower, the breathing freer, the tongue cleaner, and the strength greater.

Serpentaria is productive of good results in typhoid pneumonia.

Valeriana. The ammoniated tincture, combined with camphor, is sometimes employed in the advanced stages of pneumonia, but is inferior to musk.

Veratria has been employed with great advantage. It may be given in pills (F. 492), or in solution (if the stomach be irritable, with an effervescent draught). Prof. Voer, of Berne, commences with gr.℥, every two or three hours, until it produces vomiting or diminution of the pulse.

RÉSUMÉ OF REMEDIES.

Acetici Acidum Dilutum. Bathing the chest every morning with vinegar and water is said to lessen the liability to attacks.

Amyl Nitrite (see above).

Argenti Nitras, gr. j daily, in the form of a pill, is favorably spoken of by Dr. COPLAND.

**Arsenic.* Dr. ANSTIE says he has seen the most remarkable relief afforded by this remedy. It may be given in the form of Fowler's solution; in pill of arsenious acid; or (gr. $\frac{1}{10}$) of arseniate of soda, with extract of hop; by subcutaneous injection; or by inhalation of the smoke of arsenical cigarettes.

Assafœtida, combined with opium and ether is sometimes of service.

Camphor, in combination with opium or hydrocyanic acid, sometimes acts favorably.

Ether is praised as a palliative by Dr. ANSTIE, who considers it, however, as inferior to arsenic or strychnia.

**Morphia*, by hypodermic injection, is highly praised by Prof. BARTHOLOW.

**Strychnia*, by hypodermic injection (gr. $\frac{1}{10}$ — $\frac{1}{20}$), twice daily for several weeks, is highly lauded by Dr. ANSTIE, who has seen remarkable benefit attending its use in presence of a threatening paroxysm.

Quinia Sulphas has been advised in intermittent angina pectoris.

Zinci Sulphas sometimes proves of great benefit when persevered in during the intermissions.

Stimulants. The relief of pain is better accomplished by the use of ether, or of morphia or atropia hypodermically, than by large doses of spirits.

**Turpentine* stupes, applied to the chest, often mitigate the severity of the paroxysm, particularly in the old and debilitated.

Issues. An issue at the nape of the neck sometimes acts favorably in mitigating the symptoms.

CARDIAC DILATATION.

DR. ALFRED L. LOOMIS, NEW YORK.

The indications are: 1. To maintain nutrition; 2. To avoid violent cardiac action. For the first, our author commends an exclusively milk diet, the fluid taken in small quantities at short intervals. "As a rule, it is always safe to daily administer iron to a patient with dilated heart." Slightly stimulating baths, flannel next the skin, the avoidance of emotion, and the arrest of all exhausting discharges are important. A dry, bracing atmosphere is most suitable. The most important remedy is digitalis, in sufficiently large doses to regulate the heart's action. As it loses its controlling power by continued use, it should not be exhibited indiscriminately.

J. M. DA COSTA, M. D., PHILADELPHIA.

504. R. Pulveris digitalis, gr. v
 Extracti belladonnæ, gr. j
 Ferri redacti, ʒij. M.
 For xx pills. One thrice daily.
505. R. Emplastri belladonnæ, 4x4.
 To be worn over the cardiac region.

Belladonna is one of the best agents that can be employed to overcome irregularity of the action of the heart, and to relieve pain. Digitalis is also useful for the same purpose, especially where the action of the heart is feeble; it is the only sedative which will reduce the frequency and not the force of the heart. It may be combined as follows:—

506. R. Ferri lactatis, ʒss
 Pulveris digitalis, gr. v. M.
 For xx pills. One thrice daily.
507. R. Tincturæ digitalis, f. ʒss.
 Ten drops thrice daily, in cases of dropsy caused by cardiac dilatation.

Also,

508. R. Pulveris jalapæ compositus, gr. x.
 For one dose at night.

In such cases, a tablespoonful of lemon juice, three times a day, acts as a diuretic and stomachic. Baths, also, are advantageous. Dry cups applied to the chest relieve the pulmonary congestion. It is more important to start the secretions and relieve internal congestions than to give tonics and iron, which find their appropriate place in the after-treatment.

DR. FELIX VON NIEMEYER, PROP. UNIVERSITY OF TUBINGEN.

Our author has convinced himself, by a great number of observations, that digitalis is a very efficient means of extemporarily strengthening the heart's contractile power, and of thus allaying dropsy and cyanosis. In dilatation of the heart, digitalis, combined with an exclusively milk diet, is an invaluable remedy. Dr. von N. has repeatedly succeeded in obtaining complete removal of dropsical effusions of great magnitude and producing considerable temporary relief by this mode of treatment.

Iron, which fortunately no longer has the reputation of being "heating," should always be prescribed when the patient shows any signs of anæmia or hydræmia.

DR. WALSH.

When dropsy appears in cases of dilatation of the heart, the diuretics which yield most relief are the acetate, nitrate, iodide, and bitartrate of potassa, nitrous ether, compound tincture of iodine, the infusion and spirits of juniper, and gin. Hydragogue cathartics, elaterium, gamboge, citrate of potassa and the compound jalap powder, also aid in subduing the dropsical effusion. The following formula is a useful one for the administration of elaterium:

509. R.	Extracti elateri,	gr. $\frac{1}{2}$ -j	
	Extracti creasoti,	gr. ij	
	Extracti hyoscyami,	gr. ij.	M.

For one pill.

RÉSUMÉ OF REMEDIES.

**Belladonna* is prescribed by Prof. DA COSTA to overcome irregularity of the heart's action, and to relieve pain.

**Digitalis* is recommended in dilatation by Prof. DA COSTA and Professor NIEMEYER (*see above*), Drs. GULL, WILKS, FULLER, HANDFIELD JONES, TROUSSEAU, and others. The conclusions of Dr. W. MURRAY are as follows: 1. That *digitalis* will stimulate and strengthen a weak heart, and that the weaker are the muscular tissues of the heart the safer will be the administration of the medicine. 2. That in hypertrophied heart it will fail to reduce the pulse either in frequency or strength, and in such cases will prove dangerous. 3. That in a weak organ, acting, on account of its weakness, with great rapidity, it will reduce the number of its contractions, and, as it were, strengthen or tone them down. To strengthen and quicken the action of a weak, slowly-acting heart, and to reduce the number of the rapid strokes of a full heart, is, according to ANSTIE, to do the work of a true stimulant; bringing action up to the normal standard on the one hand, and reducing it to that level on the other (*Brit. For. Med.-Chir. Rev.*, July, 1865). Prof. DA COSTA says that *digitalis* is the only remedy which will reduce the frequency and not the force of the heart. Prof. NIEMEYER recommends *digitalis*, combined with an exclusively milk diet, as an invaluable treatment for dilatation.

Ferrum, according to Prof. DA COSTA, finds its appropriate place in the after-treatment, the secretions being regulated and the internal congestions relieved. Prof. NIEMEYER says iron should always be prescribed when the patient shows any signs of anæmia or hydræmia.

Diuretics are indicated when dropsy appears. Dr. WALSH finds that those which yield the most relief are the acetate, nitrate, iodide, and bitartrate of potassa, nitrous ether, compound tincture of iodine, the infusion and spirits of juniper, and gin.

Dry Cups to the chest are often useful to relieve the pulmonary congestion.

CARDIAC HYPERTROPHY.

ALFRED L. LOOMIS, M. D., NEW YORK.

This author condemns the practice of blood-letting to which the full pulse and symptoms of cerebral hyperæmia have prompted some practitioners in this disease. Of all remedial agents to diminish the force of the heart's action, he has found aconite the best. His prescription is—

510. R. Tincturæ aconiti rad. (Fleming's) q. s.
Two to three drops every three or four hours.

“ No drug so fully and promptly relieves the vertigo and other painful sensations that attend cardiac hypertrophy.” It is contra-indicated if the dilatation overbalances the hypertrophy of the cardiac walls. Digitalis is contra-indicated unless there is degeneration of the hypertrophied walls.

J. M. DA COSTA, M. D., PHILADELPHIA.

In the treatment of hypertrophy of the heart, as much rest as possible should be insisted upon. The patient must be directed to lie down for several hours each day. The sinking of the pulse, which naturally occurs in the recumbent position, makes this posture as potent a cardiac sedative as we possess. All stimulants to the action of the heart should be removed. This includes the removal of any dyspeptic symptoms which may be present, and of any other disordered function which can react upon the heart.

There are only two drugs in which our author has any confidence; one is aconite, or its active principle, aconitia, and the other veratria. These are the only medicines which directly and positively control the element of muscular power of the heart. Digitalis does not compare as a pure sedative with either aconite or veratrum viride. Gelseminum is useless; it has a false reputation. It is time lost to employ it. Hydrocyanic acid is often a useful and pleasant adjunct when there is gastric disturbance; alone it is of no value.

These principles apply both in the treatment of simple hypertrophy, and in that complicated with valvular disease. A certain amount of hypertrophy with valvular disease is beneficial, and judgment must be exercised in order to determine when to interfere, and when not.

DR. A. T. H. WATERS, OF LIVERPOOL.

Ferri Tinctura Chloridi is highly recommended by Dr. A. T. H. WATERS, who believes that if it be given in small doses for a long time, it will often restore to an enfeebled and fatty heart a good deal of its vigor, and possibly of its structure. But its administration must be continued for months, and even years, being omitted from time to time, as the digestive organs may demand. A chalybeate mineral water may be substituted for the tincture of chloride of iron, if the latter cannot be taken.

RÉSUMÉ OF REMEDIES.

Digitalis, according to Dr. A. L. LOOMIS, will sometimes afford relief when there is yielding of the cardiac walls.

Ergot is recommended by Dr. WARING CURRAN, as of material use in severe cases.

FUNCTIONAL PALPITATION OF THE HEART.

J. MILNER FOTHERGILL, M. D., LONDON.

This writer commends (*Medical Times*, April, 1876), as the most satisfactory prescription, the following, or an appropriate modification of it:—

514. R. Potassii bromidi,	grs. xv	
Tincturæ digitalis,	gtt. v.	M.
This amount thrice daily.		

If there is anæmia present, the potassio-tartrate of iron will be found to combine nicely with this prescription. A belladonna plaster should be worn over the region of the heart.

J. M. DA COSTA, M. D., PHILADELPHIA.

Inquiry should always be made as to the cause, for the first step in the treatment is its removal. The cause may be found to be drinking of coffee, chewing of tobacco, smoking, alcoholic drinks, masturbation, etc.

In all cases of functional disorder of the heart, attended with palpitation, *digitalis* is very serviceable, more so than *aconita*. If

**Veratrum Viride* is one of the only two drugs (the other being aconite) in which Prof. DA COSTA has any confidence.

Diuretics are strongly recommended by Dr. J. HOPK in hypertrophy, not only when there is dropsy but also when there is none, as powerful derivatives.

CARDITIS, ENDOCARDITIS AND PERICARDITIS.

PROFESSOR ARMAND TROUSSEAU, PARIS.

This eminent clinician recommends in endocarditis, and in pericarditis, general or local blood-letting, according to the strength of the patient, and the application of blisters. Internally, digitalis or digitaline, or the administration of the latter by the endermic method; or præcordial frictions with the tincture of digitalis.

ALFRED L. LOOMIS, M. D., NEW YORK.

Whatever the conditions which develop endocarditis, the patient should be kept in bed. Opium in small doses is proper. The temperature of the room should always be above 70° Fah. The chest should be covered with flannel, and not exposed. If the heart becomes feeble, digitalis is indicated. "Rest, opium, iron and the most nutritious diet, with occasional use of stimulants, constitute the most serviceable agents to be employed in the treatment of this affection."

In the *acute ulcerative form* of endocarditis large doses of quinine and stimulants are our only dependence.

In *pericarditis* the same cautions about rest, etc., are to be observed. Blisters, blood-letting, diuretics and cathartics our author considers useless; digitalis of doubtful value. "Opium, iron, moderate stimulation, rest in the recumbent posture, anodyne poultices and concentrated nutrition, are about the only measures which I have found of service in the treatment of acute pericarditis." Aspiration he commends only when it can be positively determined that pus is in the pericardium.

DR. SHINGLETON SMITH, LONDON.

Regards (*Lancet*, August 22d, 1874) the use of *aspiration* in copious effusion into the pericardium as of great value. From ten to fifteen ounces of fluid may be withdrawn, and the relief is immediate. The needle may be introduced in the space between

the fourth and fifth rib, about two inches to the left of the middle line of the trunk.

RÉSUMÉ OF REMEDIES.

Aconite is recommended by Dr. RINGER in pericarditis when the heart throbs violently, and thus produces extreme pain.

Antimonii-ses-iodidum is sometimes employed.

Aspiration (see above).

**Digitalis*, combined with *hyoscyamus tincture* (ää m_{xv}-xx), is recommended by Dr. J. HOPE in pericarditis, after the acute symptoms have been subdued.

Hydrargyrum is considered by Dr. A. T. H. WATERS as rarely if ever desirable in pericarditis, except as a purgative. He prefers to the mercurial treatment and venesection recommended by Drs. LATHAM, HOPE, and others, the milder but more effectual remedies of opium, bicarbonate of potash, the moderate and cautious use of stimulants, large linseed poultices to the chest, and blisters in the advanced stage, with good nourishment throughout the disease.

**Opium*, in grain doses, every three, four, six or eight hours, is recommended by Dr. A. T. H. WATERS in pericarditis. The great relief to pain which often follows the local abstraction of blood in this disease may be equally obtained by the administration of opium.

Potassii Iodidum, in doses of gr.iii-v ter die, is sometimes given with advantage in chronic pericarditis, appearing to favor the absorption of effused fluid.

Veratrum Viride is recommended by Dr. WARING-CURRAN (*The Practitioner*, August, 1868) in pericarditis. He gives it in the form of an extract made by inspissating the juice of the root, and combines with it grj of calomel, every two hours, carefully watching the effect.

Blood-letting. Venesection, which was formerly regarded as indispensable in inflammation of the heart and its membranes, is now much less frequently resorted to. The local abstraction of blood by *cups* or *leeches* often affords great relief to the pain, but many practitioners prefer to seek this relief by means of opium.

Blisters are hurtful in the early stages of cardiac inflammation, but useful in the advanced stages.

**Poultices*. Large linseed-meal poultices are of signal service in the earlier stages of inflammatory action.

**Turpentine stupes*, which can be employed at a far earlier period than blisters, are often of manifest advantage in relieving pain and distress, and arresting inflammatory action.

Issues in the præcordial region frequently give relief in chronic inflammation of the heart or its membranes.

RHEUMATIC CARDITIS.

**Colchicum*, with alkalies, etc., is, according to Dr. FULLER, necessary in rheumatic carditis, to counteract, and get rid of the materies morbi, without the removal of which it is difficult to conceive that a cure can be effected.

**Hydrargyrum*, combined with opium, and carried to the extent of slight salivation, is strongly recommended by Dr. FULLER in rheumatic inflammation of the heart, occurring in young, robust subjects, but

he does not advocate its use in weakly, irritable and unhealthy constitutions.

Opium, in large and repeated doses, is strongly recommended in rheumatic pericarditis by Drs. WALSH, FARRE (*St. Bartholomew's Hospital Report*, II, 1867), and others. If the surface has been blistered, *morphia* may be used endermically; and often, when opium internally is inadmissible, benefit is obtained from *morphia* hypodermically. Dr. FULLER says that in rheumatic carditis opium in full doses is indispensable in every case. In the weak and irritable, where mercury is of little service, it proves particularly valuable. It is, of all remedies, that which comes most powerfully in aid of blood-letting and mercury. If, after all active symptoms have subsided, much irritability of the heart remains, occasional doses of opium and digitalis should be given, and an opium or belladonna plaster applied to the chest, while the general health is being attended to.

Quinia Sulphas, in doses of gr.ijss, combined with gr.xx of carbonate of potash, given in mucilage every four hours, was found by Dr. WINN (*Lancet*, November 14th, 1868) highly beneficial in a case of rheumatic pericarditis attended with delirium.

Stimulants. Alcoholic stimulants are often very beneficial in rheumatic pericarditis, especially when the attack is characterized by great pain, sleeplessness and jactitating movements of the limbs. In this form of the disease Dr. ANSTIE regards alcohol as superior to opium as an anodyne and specific. It should be given in repeated small doses, the production of even the minor signs of intoxication being carefully avoided.

Blood-letting. Dr. GARROD states that so much relief follows the application of leeches to the cardiac region in rheumatic pericarditis, and in endocarditis, that he has no hesitation in recommending the measure, the bleeding never being allowed to produce any appreciable weakening of the patient. Generally, from three to twelve leeches are sufficient. The slow loss of blood by leeching is preferable to the more expeditious abstraction by cupping.

***Blisters** are recommended by Dr. FULLER in the advanced stages of rheumatic carditis, when effusion has taken place, as, of all local remedies, the most serviceable, their virtue being most unequivocally displayed when the amount of fluid is greatest.

FATTY DEGENERATION OF THE HEART.

MR. JOHN MARTIN, OF DUBLIN.

This writer (*Dublin Journal of Medical Sciences*, February, 1875), believing that the fatty change is owing to an excess of carbonate of lime in the system, recommends the use of the nitric and hydrochloric acids in combination with iron. They should be taken in small quantities and for a long time. The diet should be one avoiding compounds of lime.

There is considerable diversity of opinion in the books as to the use of digitalis in aortic cases, though in other forms of heart disease opinions are pretty well agreed. Some authorities would regard aortic insufficiency as a nearly absolute contra-indication to the use of the drug. Dr. G. W. BALFOUR regards it as the most valuable remedy in this lesion. Mr. THOMAS HAYDEN says: "Given as the tincture, and combined with iron and ether, I have rarely known digitalis to cause unpleasant symptoms; on the contrary, in numerous instances it has been followed by the most favorable and satisfactory results. I have in a few instances been under the necessity of suspending the use of digitalis owing to threatened syncope; but in the cases referred to there was fatty degeneration of the heart, in some instances with, and in others without, disease of the aortic valves." Mr. HAYDEN's prescription is: ten minims each of tincture of digitalis, tincture of chloride of iron, and spirits of nitric ether in an ounce of infusion of quassia, thrice daily.

Dr. BALFOUR, however, will not allow the fatty degeneration to be the explanation, as he quotes a very good case in which the drug was most useful, and says, speaking of fatty heart, "I have never seen any reason to withhold digitalis, and have always hitherto been rewarded by considerable and well-marked improvement." He prefers the tincture, and orders $\mathfrak{m}\mathfrak{v}$ -xxx every four hours, to be suspended if there is any faltering of the pulse or nausea on movement (*Edinburgh Medical Journal*, Feb., 1875).

PROFESSOR SÉE, PARIS.

This distinguished teacher recommends (*Union Médicale*, May, 1875) the following combined treatment in the œdema and anasarca which so frequently complicate cardiac affections. He claims to have effected their speedy disappearance.

522. R. Extracti scillæ,	gr. xv	
Pulv. rad. scillæ,	gr. iss.	M.
For 10 pills. Six to ten of these a day.		

Also,

523. R. Potassii bromidi,	3j.
This amount to be taken daily, in divided doses.	

ROBERT J. GRAVES, M. D., DUBLIN.

524. R. Potassii nitratis, 3j-ij
 Tincturæ digitalis, ℥xxv
 Tincturæ hyoscyami, ℥xv
 Misturæ amygdalæ, f.ʒx. M.

A tablespoonful from hour to hour in the œdema which accompanies disease of the heart.

DR. BOUCHUT, PARIS.

525. R. Digitalis pulveris, ʒiv
 Morphine muriatis, gr.v
 Camphoræ pulveris, ʒss
 Confectionis rosæ, q. s. M.

Divide into 40 pills. One to be administered morning and evening, in organic affections of the heart.

526. R. Tincturæ digitalis, f.ʒivss
 Vini colchici, f.ʒiss
 Potassii iodidi, ʒijss
 Syrupi sarsaparillæ, f.ʒiss
 Aquæ destillatæ, f.ʒijss. M.

A teaspoonful three or four times a day in the anasarca of heart disease. The patient should be purged every third day with compound jalap powder.

527. R. Tincturæ aloës, f.ʒj
 Tincturæ scillæ,
 Tincturæ digitalis, āā ℥xv. M.

For one dose, every second or third day, in the dropsies of heart disease.

RÉSUMÉ OF REMEDIES.

Aconite is contra-indicated or to be used with the utmost caution, in organic disease, where the power or force of the heart is impaired.

Belladonna is recommended by Dr. A. T. H. WATERS in form of plaster or lotion over the heart in palpitation combined with valvular disease, the patient at the same time being kept at rest in bed; rest alone is often efficacious. In severe cases belladonna is superior to digitalis (which see).

**Digitalis* is recommended by Dr. A. T. H. WATERS in valvular disease, especially when there is hypertrophy of the heart. Dr. E. MACKEY (*British Medical Journal*, May 31st and July 11th, 1868) thinks that neither *mitral regurgitation* nor *mitral obstruction* contra-indicates the use of digitalis, and gives numerous cases in which it was employed with advantage; but he regards its employment in *aortic regurgitation* and in *fatty degeneration* as contra-indicated or of doubtful safety. In any case where the heart's action is very feeble, Dr. M. considers that the commencing dose of the tincture should be ℥v-x every four or six hours; this dose may be increased to ℥xv-xx, or even ℥xxx, with benefit; but, as a general rule, such a dose as ℥xxx should not be repeated more than twice in the twenty-four hours. An equivalent dose is f.ʒss of the fresh infusion, or gr.j of the powdered leaves. The patient, before taking such a dose, must be kept recumbent at least half an hour, and kept so for two hours after. Dr. M.

hesitates to prescribe a larger dose than ℥℥ of the tincture to any patient following his occupation, and believes that half-drachm doses of the tincture, repeated several times at short intervals, especially in the upright position, may dangerously interfere with the circulation, whether by over-stimulation or partial paresis. But given in the manner directed, no cumulative action has been observed.

Ferri Chloridi Tinctura is recommended in chronic valvular disease by various writers; given in long-continued small doses, is directed for fatty degeneration (which see).

**Morphia* has been employed hypodermically by Dr. CLIFFORD ALLBUT (*Practitioner*, December, 1869) with marked advantage in diseases of the heart. He gives the injection in the evening and enjoins perfect quiet afterward. His commencing dose is gr. $\frac{1}{2}$ or $\frac{1}{4}$ of the muriate increased, in ordinary cases, to gr. $\frac{1}{4}$ for an adult. He finds it valuable in *mitral regurgitation*, but less valuable in mitral obstruction and in disease of the aortic valves; but in aortic disease, when the heart is big and pumping, it gives much ease. The urine, however, should always be examined and the morphia given with caution or withheld, if albumen be found. Prof. BARTHOLOW also recommends morphia hypodermically in *mitral disease*, but is opposed to its employment in narrowing and obstruction of the aortic orifice.

**Senega*, combined with some other diuretic, is recommended by Dr. BARLOW in valvular disease of the heart, to promote the action of the kidneys and relieve the palpitation, especially the palpitation arising from aortic disease. He employs the following formula:—

528. R.	Spiritus ætheris compositus,	f.ʒij	
	Tincturæ hyoscyami,	f.ʒiiss	
	Decocti senegæ,	f.ʒiij	
	Misturæ camphoræ, q. s., ad.	f.ʒiv.	M.

Take $\frac{1}{4}$ thrice daily.

Veratrum Viride is often employed with benefit on the pulse.

Zinci Sulphas is favorably spoken of by Dr. BARLOW in *mitral disease*. He employs:—

529. R.	Zinci sulphatis,	gr.iiij	
	Extracti lupuli,	gr.vj.	M.

Make six pills. Take one thrice daily.

The dose of the zinc should be gradually increased to gr.iiij. When there is much palpitation, he advises its combination with camphor.

530. R.	Zinci sulphatis,	gr.ʒ-iiij	
	Camphoræ,	gr.ʒ	
	Extracti hyoscyami,	gr.ij.	M.

Make into pills. Take thrice daily. When there is much irritability of the stomach the iodide should be substituted for the sulphate.

Diuretics are found beneficial by Dr. HOPK in every stage of valvular disease of the heart. They draw off the serous portions of the blood, diminish the quantity without deteriorating the quality of that fluid, and thus relieve palpitation and dyspnoea, and obviate infiltration, without materially reducing the strength.

IV. DISEASES OF THE DIGESTIVE SYSTEM.

The Mouth—The Fauces—Anorexia—Biliary Calculi—Cholera Asiatica—Colic (Flatulence, Ileus, Colica Pictorum)—Constipation, Habitual—Diarrhœa (acute, chronic)—Dysentery (acute, chronic)—Dyspepsia—Gastralgia—Gastritis—Gastric Ulcer—Hematemesis—Hepatitis, (acute, chronic)—Jaundice,—Liver: Functional Disorders of—Pyrosis—Vomiting.

THE MOUTH.

STOMATITIS.

In this disease Dr. ROBERTS BARTHOLOW extols the following:—

531. R.	Potassæ chloratis,	℥j	
	Acidi carbolici	℥ss	
	Aquæ destillatæ,	℥iv.	M.

For a lotion. Apply directly to the affected part.

"There is no more effective remedy for *ulcerative stomatitis*, the *stomatitis* of nursing women, and *aphthæ*."

PROF. S. D. GROSS, PHILADELPHIA.

532. R.	Liquoris plumbi subacetatis,	f.℥j	
	Aquæ.	f.℥viij.	M.

To be used as a mouth wash every hour or two in cases of *mercurial stomatitis*.

The only objection to this lotion is that it discolours the teeth, which effect, however, quickly disappears. At the same time, internally, the chlorate of potassa should be administered. Fifteen to thirty grains are to be taken *ter die* in mucilage or lemonade.

J. COPLAND, M. D., OF LONDON.

533. R.	Acidi muriatici diluti,	f.℥ss	
	Tincturæ capsici,	f.℥jss	
	Mellis,	f.℥v	
	Infusi rosæ,	f.℥v.	M.

To be used in *stomatitis* when the ulcers are slow in healing.

Or employ :

542. R. Tincturæ myrrhæ, f.ʒiij
 Mellis despumatæ, f.ʒj
 Infusi rosæ, f.ʒiv. M.
 Used as a gargle, as above.

THE FAUCES.

INFLAMED SORE THROAT.

J. M. DA COSTA, M. D., PHILADELPHIA.

543. R. Cupri sulphatis, ʒj
 Aquæ, f.ʒj. M.

Apply with a brush three times a week in cases of follicular pharyngitis.

E. W. FRISBIE, M. D., EAST SPRINGFIELD, NEW YORK.

544. R. Iodinii, gr. x
 Potassii iodidi, gr. xx
 Mucilaginis acaciæ, f.ʒj
 Sacchari albi, ʒij-ʒiv
 Aquæ, f.ʒss. M.

To be applied with a camel's-hair pencil two or three times daily in irritable and inflamed sore throat, follicular pharyngitis, etc.

PROFESSOR JOSEPH PANCOAST, M. D., PHILADELPHIA.

545. R. Cinchonæ rubri, ʒss.
 Aquæ bullientis, Oss. M.

Strain and add:

546. R. Tincturæ myrrhæ,
 Tincturæ krameris,
 Mellis despumatæ, aa f.ʒj
 Acidi muriatici diluti, gtt. xv. M.

Use as a gargle in cases of chronic sore throat.

DR. N. GALLOIS, PARIS.

547. R. Aluminii et potassii sulphatis, ʒj
 Decocti quercus albæ, f.ʒiv
 Vini albæ, f.ʒijss. M.

This is a useful gargle in chronic inflammatory affections of the throat attended with relaxation of the uvula.

548. R. Sodii boratis, ʒj
 Extracti opii, ʒj
 Mellis, f.ʒj
 Infusi salviæ, f.ʒvj. M.

Employ as a gargle in inflammatory sore throat.

549. R. Acidi tannici, 3ss
 Mellis rosæ, f. 3iss
 Aquæ rosæ, f. 3ivss. M.
 Employ as a gargle in chronic sore throat.

550. R. Potassii nitratis, 3j
 Sodii sulphatis, 3v
 Antimonii et potassii tartratis, gr. ss
 Syrupi acaciæ, f. 3iss
 Aquæ sambuci, f. 3ivss. M.
 A tablespoonful every hour or two in acute inflammatory sore throat.

551. R. Sodii boratis, 3ijss
 Glycerinæ, f. 3j. M.

Or:

552. R. Acidi tannici, 3j
 Glycerinæ, f. 3j. M.
 Dip a fine brush in either of these solutions, and touch the false membranes several times a day.

553. R. Acidi tannici, 3ss
 Aluminii et potassii sulphatis, 3j. M.
 Reduce to a fine powder, and use by insufflation.

DR. RENAULDIN, FRANCE.

554. R. Ammonii chloridi, 3j
 Spiritus camphoræ, f. 3ss
 Oxymellis, f. 3j
 Decocti cinchonæ rubræ, f. 3vij. M.
 Employ as a gargle in gangrenous sore throat.

555. R. Acidi muriatici, gtt. xx-xxx
 Mellis rosæ, f. 3j
 Decocti cinchonæ rubræ, f. 3v. M.
 Employ as a gargle in gangrenous sore throat.

ANOREXIA.

DR. N. GALLOIS, PARIS.

556. R. Tincturæ nucis vomicæ, gtt. v
 Extracti gentianæ, gr. xv
 Syrupi aurantii corticis, f. 3iss
 Vini cinchonæ, f. 3v. M.
 One-half to be taken half an hour before each of the two principal meals, in order to awaken the appetite.

557. R. Rhei, gr. xxv
 Aloës socotrinæ, gr. xxv
 Myrrhæ,
 Saponis, aa Dj
 Spiritus menthæ piperitæ, m. iij.
 Extracti taraxaci, Dj. M.

Divide into 45 pills, and order from one to three at a dose, as laxatives, and to stimulate the functions of the stomach.

558. R. Aloës socotrinæ, gr. xvj
 Ipecacuanhæ, gr. vijsa
 Zingiberis, gr. xxv
 Syrupi, q. s. M.

Divide into 16 pills, order one a day, before dinner, to stimulate the appetite and regulate the system.

559. R. Fel bovini purificati, Div
 Ferri carbonatis, 3ss
 Rhei,
 Extracti gentianæ, aa Div. M.

Divide into 120 pills, order six or ten a day, to combat a want of appetite.

DR. REECE, FRANCE.

560. R. Sodii carbonatis exsiccata, Dj
 Extracti gentianæ, 3ij
 Zingiberis, gr. xij M.

Divide into 36 pills, and order two morning and evening, as absorbents and stomachics.

PROF. FONSSAGRIVES, MONTPELLIER, FRANCE.

561. R. Extracti cinchonæ flavæ, 3ss
 Tincturæ nucis vomicæ, gtt. v
 Syrupi aurantii corticis, f. 3iiss
 Claret wine, f. 3viij. M.

Take several tablespoonfuls, at the commencement of the meals, to stimulate the appetite.

LONDON HOSPITAL.

562. R. Pulveris anthemidis, 3ss
 Pulveris rhei,
 Pulveris zingiberis, aa 3ij. M.

Divide into 16 powders. Take one a day, an hour before or after meals, to stimulate the appetite and facilitate digestion.

DR. HUSS, FRANCE.

563. R. Pulveris nucis vomicæ, gr. iv-ix
 Pulveris quassia, 3ss.
 Cretæ præparatæ, aa 3ss. M.

Divide into 20 powders, and order one three times a day, half an hour before each meal, to stimulate the appetite and favor digestion.

CHOLERA ASIATICA.

THE MEDICAL STAFF, U. S. ARMY.

The classical work on *The Cholera Epidemic of 1873 in the United States*, mainly prepared by Dr. ELY McCLELLAN, U. S. A., contains the well-digested experience of practitioners during the last cholera epidemic in this country. We quote some of the most successful measures adopted.

Dr. R. W. MITCHELL, of Memphis, Tenn., writes: "When satisfied that I had cholera to contend with, as indicated by rice-water discharges, vomiting, cramps and shrinkage of extremities, I ceased medication by the stomach, and used the formula given hypodermically:—

568. R.	Acidi sulphurici,	3ss	
	Morphiæ sulphat,	gr. ʒ	
	Spiritus vini gallici,	3iss	
	Aquæ destillatæ,	ʒiij.	M.

"The above was injected under the skin of the arms, legs and over the stomach every hour until the symptoms of the disease were relieved."

Dr. G. B. THURSTON, of Memphis, Tenn., writes: "The general treatment that I adopted was about as follows: Calomel and opium in alterative doses, say in two of the former to one of the latter, repeated every hour for several hours. In conjunction with this, used the following:—

569. R.	Extracti canabis indicæ,	gr. xvj	
	Gum camphor,	3ss	
	Chloroform,	3ss	
	Olei terebinthinæ,	ʒij	
	Mucilag. acaciæ,		
	Syrupi simplicis,	ss	
	Aquæ cinnamomi,	ʒj.	M.

Dose, a teaspoonful every one or two hours.

Dr. J. T. JONES, of Nashville, Tenn., reports that, in the cold stage of cholera, he has used creasote with greater success than any other article of the materia medica, and suggests the following formula:—

570. R.	Creasoti,	gtt. j	
	Aquæ camphoræ,		
	Infusi gentianæ compositæ,	ss	
		ʒvj.	M.

At a dose, and repeated every two hours.

Dr. S. T. CHANDLER, of Campbellsville, Ky., who treated, during the epidemic of cholera in 1854, some sixty to seventy cases of the disease in its various stages, records his experience as having been largely in favor of the use of dilute sulphuric acid in full doses and repeated every fifteen to thirty minutes, until the vomiting and purging are arrested. In the epidemic of the year 1873, the same plan of treatment was adopted, and with like results. "The acid relieves the nausea, arrests the vomiting like a charm, and gradually the dejections are stopped."

Dr. McCLELLAN adds, that the necessity of instituting treatment at the earliest moment after the occurrence of a diarrhoea was most generally recognized throughout the area of infection. Whenever physicians, during the progress of the epidemic, ceased the attempt to diagnose between cholera, cholera-morbus and diarrhoea, and treated all cases that occurred as cases of cholera, the lists of mortality were reduced; while, on the other hand, increasing mortality was shown whenever too great reliance was placed upon diagnostic powers.

The evidence is conclusive that the exhibition of opium, followed by alterative doses of calomel, and absolute rest in the recumbent posture, almost invariably arrested the disease when in the premonitory stage. In the advanced stages, the entire range of the pharmacopœia seems to have been brought into use, with no better results than had been obtained in previous epidemics.

The experience of the writer is strongly corroborative of the beneficial results which may be obtained from the use of sulphate of iron and dilute sulphuric acid as prophylactics during an epidemic of cholera; and, further, that the most successful treatment of the disease is to be found only in all that is implied in the word sanitation.

Dr. JOHN M. WOODWORTH, Supervising Surgeon U. S. Marine Hospital Service, records the experience of his department in the following language: "Beginning with the year 1814, the cholera literature down to the present time abounds in proofs, clinical, physiological, pathological and meteorological, of the efficacy of sulphuric acid, and there can be no doubt, despite the dicta of the last International Sanitary Conference, that we possess in the mineral acid a certain means of prophylaxis against cholera. The lessons of the epidemic of 1873 point strongly to the value of sulphuric acid even as a therapeutic agent against the disease.

contaminated—particularly, that it has not been drawn from a well near any sewer. Moreover, his excreta should be received in a pan containing a disinfecting fluid, and then at once thrown away.

The greatest caution will subsequently be required for many days as to diet; not a few deaths have occurred from the too early use of animal food. As a rule, broths and farinaceous substances only should be allowed, without any solids whatever, until the renal secretion has been fully re-established, and all the symptoms have vanished.

DR. FLEMING, QUEEN'S HOSPITAL, BIRMINGHAM.

572. R.	Plumbi acetatis,	gr. xxiv	
	Liquoris morphine acetatis,	f. ʒj	
	Acidi acetici diluti,	℥. xij	
	Aquæ destillatæ,	f. ʒvj.	M.

A tablespoonful every two hours (an hour before or an hour after food is taken) in a tablespoonful of water; beef tea and milk, alternately, every four hours; warm negus in moderation.

The value of acetate of lead and opium in diarrhoea is well known. Dr. FLEMING calls attention to the *mode of administration*. The astringent action of both lead and morphia is in consequence of their absorption and conveyance in the blood to the affected part. Hence, the marked advantage of giving them in a thorough solution in distilled water, which promotes their passage into the blood. This is further secured by giving the medicine on an empty stomach before meals, and so avoiding, as far as possible, precipitation of the lead by contact with the gastric fluids. In the ordinary lead and opium pill, more or less lead is probably converted into the meconate; or the pill dissolving slowly in the stomach in contact with the gastric secretions, the lead runs much risk of conversion into the insoluble chloride. Our author has adopted this mode of administration for many years, and speaks strongly of its efficiency. In the diarrhoea of children the same mixture, according to the following formula, gives most valuable results:—

573. R.	Plumbi acetatis,	gr. xij	
	Liquoris morphine acetatis,	℥. xij	
	Acidi acetici diluti,	f. ʒj	
	Aquæ destillatæ,	f. ʒiij.	M.

A teaspoonful every five, six or eight hours, to a child one year of age.

WILLIAM SEDGWICK, M. R. C. S., ETC., LONDON.

Our author strongly recommends (the *Lancet*, August 19th, 1871) *dilute phosphoric acid* in half-drachm doses, combined with syrup of orange, and largely diluted with ice-water.

In cases of choleraic diarrhoea, and in the early stage of confirmed cholera, this remedy appears to be capable of checking the progress of the disease with greater certainty than sulphuric acid.

GEORGE JOHNSON, M. D., F. R. C. P., PROFESSOR OF MEDICINE IN KING'S COLLEGE, LONDON; PHYSICIAN TO KING'S COLLEGE HOSPITAL, ETC.

In the treatment of cholera and choleraic diarrhoea, which is, in fact, cholera in a mild form, the main principle to bear in mind is, that the discharges are as essentially curative as is the eruption of small-pox. The discharges are not to be abruptly stopped by opiates. Experience has abundantly proved that this is a pernicious practice. Neither are they permitted to accumulate in the alimentary canal. There is one remedy which is almost universally applicable in all forms and stages of the disease, and that is an abundant supply of cold water, to flush the intestinal sewer and to wash out the poisonous discharges. A copious imbibition of pure cold water will suffice for the cure of most curable cases.

Palpation and percussion of the abdomen reveal the fact that there occurs not unfrequently a painful and sometimes a paralyzing over-distention of the bowel by rapidly effused morbid secretion. This, if not promptly relieved, may even go to the extent of causing a fatal obstruction. More especially is this likely to happen when the sensibility of the bowel has been deadened by opium. The plan to prevent and to remove this accumulation is to give some quickly-acting yet unirritating evacuant dose. For this purpose, castor oil is, on the whole, better suited than any other remedy. The objection sometimes raised—that all remedies must be useless, because none are absorbed—obviously does not apply to such a remedy as castor oil, which, by its merely local action upon the mucous surface, stimulates the bowel and expels its contents. Experience has amply proved the success of the treatment in this and kindred classes of cases.

The time to give opium, if at all, is in small doses, to soothe the bowel, after the expulsion of the poisonous secretions. Opiates are useless, or even dangerous, when the blood is poisoned, or when the bowel contains offensive, morbid secretions. Opiates in the early stages of diarrhoea and cholera would be more frequently and decidedly injurious, were it not for the fact that their absorption is prevented by the rapid current of liquid which is being passed from the blood into the alimentary canal; therefore, they

Dr. WARING considers this treatment worthy of trial. In an epidemic of cholera at Assam, in 1853, Dr. BARRY used nitrate of silver internally with great success, giving one grain after each stool.

Atropia Sulphas, hypodermically, in dose gr. $\frac{1}{100}$ — $\frac{1}{50}$, is recommended by Dr. HARLEY as one of the most appropriate and useful means of resuscitation in the collapse of cholera. It stands at the head of all our stimulants in such cases, for there is no medicine which approaches belladonna in its simple, direct, immediate, and powerful influence in exalting the force and rapidity of the heart's action.

* *Camphor* is recommended by Dr. SYDNEY RINGER, from personal experience. He gives six drops of a strong alcoholic solution of camphor every ten minutes, until the symptoms have abated, and then less frequently. By this treatment he generally, at once, controlled the vomiting and diarrhoea, and often altogether checked them, removed the cramps, and restored warmth to the extremities. An Italian physician, Dr. RUBINI, of Naples, is said to have treated with success nearly six hundred patients by a solution of camphor in alcohol at 60° over proof. The commencing dose was gtt. iv, every five minutes (in severe cases, gtt. xx, or more), persevered in until reaction set in, the patient being well wrapped up in blankets. It should be given in sugar, and not in water, as in the latter the camphor solidifies and loses its power.

Cannabis Indica has been highly spoken of, ℥x—xxx of the tincture being administered in repeated doses.

Carboligni, in drachm doses has been employed with repeated benefit.

Carbolic Acid has, it is stated (*Medical Press*, Jan. 22d, 1868) proved successful.

* *Chloroform*, in doses of ℥v—viij every hour or half-hour, often arrests the vomiting and relieves the spasms and cramps in the early stages of cholera. When the vomiting is excessive, a little chloroform, on lint, placed over the epigastrium and covered with oiled silk or gutta-percha, will frequently relieve it. Chloroform liniment, alone or with turpentine, diligently used, is very effectual against the spasms and cramps. The spasms are also quickly relieved by chloroform inhalations, stopped short of complete anæsthesia. In giving chloroform internally, some prefer to combine it with the carbonated alkalies, soda or potash (grs. xl—lx) in solution; others, with the oil of turpentine (℥xx—xxx). Dr. T. M. LOWNDES, of the Bombay army, advises (*British Medical Journal*, Aug. 29th, 1868) the following formula, which he has used for years in the treatment of choleraic diarrhoea, with the best results:—

581. R. Chloroformi,	℥xv—xx	
Tincturæ opii,	℥v. xv	
Spiritus vini,	f. ʒj	
Aquæ,	f. ʒj.	M.

Chloroform, as a remedy in cholera, has the advantage that, being very volatile, it does not, like calomel and solid opium, accumulate in the stomach, and thus produce serious effects when reaction is established.

Hydrargyri Chloridum Mite has, as Dr. WARING remarks, been given in cholera for upward of half a century, in every variety and stage of the disease, in every gradation of dose, from one grain to sixty, in almost every possible form of combination, with the view, by turns, of obtaining its purgative, or its cholagogue, or its stimulant, or its sedative action, and the reported results have been of the most diversified and unsatisfactory character. Dr. AYRE has reported great success

**Ricini Oleum* is the purgative *par excellence* employed by Dr. G. JOHNSON in the "eliminative treatment." He directs, as early in the premonitory diarrhoea as possible, a tablespoonful of castor oil in a mixture of orange or lemon juice and water, or cold water, or other convenient vehicle. If this be vomited, it should be again given, and the patient directed to lie still and take no more liquid for half an hour, by which time the oil will have passed from the stomach into the bowels. Within an hour or two the oil will usually have acted freely, when a tablespoonful of brandy in thin arrowroot or gruel is given; and if there be much feeling of irritation, with a sense of sinking, *gtt.v-x* of tincture of opium, in cold water. In this manner most cases of choleraic diarrhoea are promptly arrested. Rhubarb (*gr.xv* of the powder, or *f.3ss* of the tincture) may be employed if objections exist to castor oil. If vomiting be present, it should be encouraged by copious draughts of tepid water; and if nausea exists without vomiting, especially if the stomach is supposed to contain congested or unwholesome food or morbid secretions, an emetic is advised (*gr.xx* of ipecacuanha, or a teaspoonful of mustard, or a tablespoonful of common salt). The approval given to this "evacuant system" of treatment by Sir T. WATSON, and the success reported from it in the hands of numerous practitioners, entitle it to consideration and general trial.

Sodæ Carbonas forms one of the principal ingredients in the "saline treatment" of Dr. WILLIAM STEVENS.

Sodæ Chloridum was formerly given in large draughts of cold water, with the view of inducing emesis, and at the same time supplying the blood with the saline constituents supposed to be carried out of the system in the evacuations.

Sulphur was first suggested as a remedy by Dr. A. BLACKLOCK, of the Madras army, in 1848. He recommended, also, as a prophylactic, during epidemics, sulphur internally, and a diet rich in sulphureted ingredients. Dr. J. GROVE (in his work on epidemic cholera, in 1865) highly praises this remedy, which he prescribes as follows:—

584. R. Sulphuris præcipitati,
Sodii bicarbonas, ℥ss ℥iv
Spiritus lavandulæ compositus, f.℥xxiv
Aquæ, f.℥lxxij. M.

The soda and sulphur are to be first thoroughly triturated together, in a mortar, the spirit of lavender gradually added, till the whole is well mixed, when the water is added.

Dose, two teaspoonfuls, in a little water, every two, three or four hours, in simple choleraic diarrhoea; but if the case is urgent, every ten or fifteen minutes. In sudden or severe attacks, *℥x-xxx* of laudanum are given with the first dose.

Terebinthina Oleum has been employed internally, as well as externally, with benefit.

Blood-letting has its advocates in cholera, who consider that by relieving the pulmonary embarrassment, and freeing the circulation, it increases the excreting power of the intestinal mucous membrane. But if employed, it should invariably be conjoined with the use of stimulants.

**Ice* in lumps and iced drinks, given *ad libitum*, are grateful to the patient, and highly beneficial in relieving the burning heat at the pit of the stomach; and the intolerable thirst, arresting the vomiting and exciting reaction.

Salines. The saline treatment has been already described.

PROF. ROBERTS BARTHOLOW, CINCINNATI,

Has found marked advantage from the use of permanganate of potassa in the flatulence and dyspepsia so constantly attendant on obesity, as follows:—

587. R. Potassæ permanganas, gr.vij
Aquæ destillatæ, f.ʒij. M.
Keep in a glass-stoppered bottle. Dose—A teaspoonful thrice daily.

DR. BOUCHUT, PARIS.

588. R. Chloroformi, f.ʒijss
Alcoholis diluti, f.ʒijss
Syrupi acaciæ, f.ʒviij. M.

A small wineglassful thrice daily, to persons subject to hepatic colic.
Abstinence from fats, oils, fatty food and strong wine.

DR. TOURASSE, FRANCE.

589. R. Chloroformi, f.ʒss
Olei amygdalæ dulcis, f.ʒj
Syrupi acaciæ, f.ʒiss. M.

To be well shaken. A tablespoonful every quarter or half-hour in hepatic colic.

590. R. Magnesii carbonatis, f.ʒj
Rhei pulveris, gr.xxx
Tincturæ rhei, f.ʒij
Tincturæ opii, ℥xv
Spiritus anisi, gtt.vj
Spiritus menthæ piperitæ, f.ʒij
Aquæ destillatæ, f.ʒvj. M.

This is a popular remedy in the west of England in intestinal pains.
From three to six tablespoonfuls a day

RÉSUMÉ OF REMEDIES.

Ammonii Carbonas, in doses of gr.v-viij in some aromatic water, frequently proves useful, especially in the flatulence of atonic dyspepsia or of hysterical females.

Anthemis, in strong infusion, or gtt.ij-iiij of the volatile oil, frequently affords relief after the failure of other remedies.

Assafætida, in enema, is of especial value in the flatulent colic of hysteria.

Cajuputi Oleum often affords immediate relief.

Carbo Ligni, inclosed freshly prepared in gelatine capsules, each containing gr.x of heavy vegetable ivory charcoal (dose, two, *i. e.* gr.xx), is a valuable remedy, from its gas-absorbent property. If administered in this manner, the large nauseous doses so frequently prescribed are avoided.

Carbolic Acid is recommended by Dr. KEMPTER in cases accompanied with foul breath.

Cardamomum, in the form of the compound tincture, is highly serviceable.

Carui Oleum is often of benefit, in doses of gtt.ij-v on sugar.

Caryophyllum in infusion, or the volatile oil (gtt.ijj-v), is useful.

Cinnamomum is a pleasant and excellent carminative.

Creasotum, in doses of gtt.j in pill thrice daily, will greatly relieve the distressing flatulence of hypochondriasis.

Etheris Spiritus Nitrosi, in doses of a teaspoonful in a cupful of any convenient vehicle, is a popular and efficacious remedy.

Etheris Spiritus Compositus is useful, particularly in the flatulence of hysterical females.

Juniperi Oleum is an efficient carminative.

Lavandula, in the form of the compound tincture, is an agreeable remedy.

Menthæ Piperitæ Oleum, with or without a few drops of laudanum, is a pleasant carminative.

Myristicæ Oleum, in doses of gtt.ij-v, affords relief. Grated nutmeg may be given in a little warm brandy-and-water.

Rutæ Oleum, in doses of gtt.ij-v on sugar, is a popular remedy; or the infusion of rue may be given.

Sodii Bicarbonas is effectual when there is acidity of the primæ viæ.

**Nux Vomica* is valuable in obstinate flatulence. Dr. BARLOW recommends the following useful formula:—

591. R.	Extracti nucis vomicæ,	gr.iss	
	Argenti nitratis,	gr.ij	
	Extracti lupuli,	gr.xij.	M.

Make six pills. Take one thrice daily. This formula is particularly serviceable when there is also pyrosis and heartburn.

Terebinthinæ Oleum in enema is an excellent remedy.

Zinci Sulphas has been recommended in flatulent affections of the bowels, especially of the colon. The following formula has been employed:—

592. R	Zinci sulphatis,	gr.xviii	
	Pulveris opii,	gr.ij	
	Mucilaginis,	q. s.	M.

Make six pills. Take one four or five times a day, after a meal. When the stomach can dispense with the opium, substitute extract of gentian or rhubarb.

Zingiber in tincture or effusion (with or without the addition of carbonate of soda and aromatic spirit of ammonia), is of great benefit. A ginger plaster over the epigastrium often admirably relieves colicky pain.

**Carminatives* act by stimulating the stomach, causing the expulsion of flatus and the relief of the pain produced by its presence.

Cathartics. A purgative of castor oil, or of oil of turpentine, frequently affords immediate relief.

A useful oleaginous mixture in dysenteric diarrhœa.

W. KEMPSTER, M. D., UTICA, N. Y.

634. R. Acidi carbolici, gr. j
Aquæ, f. 3j M.

This is the strength of the standard house solution in the State Lunatic Asylum at Utica, New York. Of this a dessertspoonful is given thrice daily, in case of sluggishness of the bowels accompanied by offensive breath. Diarrhœa produced by eating unripe fruit, or other articles which promote fermentation, is relieved by combining a drachm or two of the solution with the usual remedies. When a fetid smell emanates from the cutaneous surface, order a warm bath, and then wash the surface with a solution, gr. v-f. 3j.

JOHN FORSYTH MEIGS, M. D.

635. R. Pulveris opii, gr. vj
Extracti nucis vomicæ, gr. iij
Cupri sulphatis, gr. j. M.

Divide into twelve pills. One three times a day, in chronic diarrhœa.

The value of this pill has been proved by army surgical experience.

CHARLES MURCHISON, M. D., F. R. C. S., ETC.

636. R. Acidi tannici, Div
Tincturæ opii, m. xl
Glycerinæ, f. 3ss
Aquæ menthæ piperitæ, ad. f. 3iv. M.

A tablespoonful in a tablespoonful of water every four hours.

After the diarrhœa is checked order :—

637. R. Acidi nitro muriatici, f. 3ss
Tincturæ opii, m. xl
Syrupi, f. 3ss
Aquæ, ad. f. 3iv. M.

A tablespoonful in water, four times a day.

DR. JEANNEL, PARIS.

638. R. Cinchonæ flavæ pulveris, aa Div
Calcei phosphatis precipitatæ, 3ss
Aurantii amari corticis pulveris, 3ijss
Confectionis rosæ, q. s. M.
Syrupi,

Make an electuary, of which give a teaspoonful or tablespoonful several times a day in diarrhœa.

DR. BOSSU, PARIS.

639. R. Extracti opii, gr. iss
Hydrargyri chloridi mitis, aa gr. iij
Ipecacuanhæ pulveris, q. s. M.
Confectionis rosæ,

Divide into ten pills. One morning and evening in chronic diarrhœa.
Roast meat at the meals, exercise in the open air.

procure one or more motions daily. The following formula has been advised :—

598. R. Aluminis, 3j
Acidi sulphurici diluti, f.3j
Aquæ, Oij. M.

This, sweetened to the taste, should be drunk during the day.

A grain of opium may be taken at night, and sulphurous baths employed.

Chloroform has been given with good results, by the mouth, and by the rectum in enemas, and externally applied, compresses moistened with it, diluted, being placed on the abdomen.

* *Hydrargyri Chloridum Mite.* A full dose of calomel, with or without opium, and followed in a few hours by castor oil and an enema of turpentine, frequently gives great and prompt relief.

* *Opium*, in full doses (gr.j-ij), alone or combined with alum or calomel, and followed by castor oil, is a most useful remedy, its administration being repeated until relief is obtained. The hypodermic injection of morphia is advisable in severe cases.

Strychnia has been recommended, but should be used with caution, especially in acute cases.

CONSTIPATION—HABITUAL.

The habit of constipation may be broken up by *massage, change of diet, enemata, laxative mineral waters, or drugs.*

In regard to *massage*, or the movement cure, the following little operation executed by the patient upon himself, when properly performed, is valuable :—

Place the tips of the fingers of the right hand exactly over the caecal region, with *very slight* pressure; carry them upward, along the ascending colon, to the right hypochondrium; continue the movement *without any intermission* over the region of the transverse colon to the angle of junction with the descending colon; stop not, but proceed downward, gently and steadily, to the iliac region of that side; instead of the previously very gentle pressure, the finger must now be pressed firmly and deeply (without pain) into the pelvic cavity, and there retained for about fifteen seconds, then remove the hand altogether, rest a few seconds, and repeat the procedure. This may be continued for the period of from a few minutes to a quarter of an hour or more. Some little care and tactile dexterity are needed to do this properly; and where the hand is dry, or the cuticle thick and hard, it is advisable to slightly moisten the ends of the fingers. When the right hand is tired, the left can be used, and so alternately, but it is better not to alternate

them too rapidly. If there be failure, it must not necessarily be given up. Invalids themselves will often fail, almost invariably, if their bowels be *extremely intractable*. But now the aid of a friend for passive movements may be invaluable. The medical adviser can give instructions regarding the precise anatomical relations of the parts involved, and the method of performance. The proceeding should usually extend over a period of from five or six minutes to occasionally twenty-five minutes.

For occasional use, in the treatment of *constipation in old age*, the following pill affords an excellent formula :

599. R. Extracti colocynthidis compositi, gr.v-viiij
Extracti hyoscyami, gr.ij. M.
For one pill.

J. M. DA COSTA, M. D., PHILADELPHIA.

600. R. Podophyllin, ss gr.j
Extracti belladonnæ, gr.v
Capsici, Dj. M.
Pulveris rhei,
For twenty pills. One three times a day.

Belladonna is undoubtedly a stimulant to the muscular fibres of the intestines. It acts on them as it acts on the bladder ; it stimulates to contraction. It also increases the action of purgatives, enabling the physician to get along with smaller quantities of purgative medicine. Podophyllin is useful in torpor of the upper portion of the bowel, to increase the secretion of the liver.

601. R. Tincturæ gentianæ compositæ, f.ʒiij
Tincturæ rhei dulcis, f.ʒj
Tincturæ belladonnæ, f.ʒiss M.
Dessertspoonful thrice daily.

602. R. Extracti gentianæ, ʒj
Extracti nucis vomicæ, ss
Podophyllin, gr.ijss
Olei cajuputi, gtt.xx. M.
For twenty pills. One twice a day as a tonic for chronic constipation.

603. R. Extracti belladonnæ, gr.iss
Pulveris rhei, gr.xxiv.
Pulveris singiberis, gr.xij. M.
For twenty-four pills. One four times a day.

S. S. BIRCH, M. D., LONDON.

604. R. Extracti rhei alcoholici, ʒss
Extracti taraxaci, gr.xxiv
Quiniæ sulphatis, gr.ij. M.
Divide into twelve pills.

One should be taken either on rising in the morning or at dinner-time, or even at both periods when the constipation is very obstinate. This is a very gentle stomachic and tonic evacuant, particularly useful for the delicate. In addition, when there is torpor of the liver, deficiency or perversion of the biliary secretion, the patient should be ordered:—

605. R. Hydrargyri cum cretâ, gr. 4-j
Sacchari albi, gr. v. M.
For one powder.

This is a sufficient dose, when given alone at bedtime, for two or three successive nights, or in very sensitive persons every second or third night. But the hydrargyrum cum cretâ is often prepared imperfectly, and then causes considerable annoyance and dissatisfaction to the practitioner.

PROF. ROBLEY DUNGLISON.

606. R. Magnesiae sulphatis, 3j
Potassae bitartratis, 3j
Ferri sulphatis, gr. x. M.

For one powder. Add to a quart of water and take a wineglassful, on rising, every morning.

This recipe was frequently recommended in his lectures by the late distinguished professor of physiology.

JOHN FORSYTH MEIGS, M. D.

607. R. Confectionis sennæ, 3j
Potassae bitartratis, 3ij
Sulphuris præcipitati, ss
Ferri subcarbonatis, 3j
Mellis despumati, q. s. M.

Make an electuary. Teaspoonful after meals.

PROF. METCALF, M. D., OF NEW YORK.

608. R. Extracti aloës (purif.), ss
Extracti hyoscyami, 3j
Extracti nucis vomicæ, gr. xij
Olei anisi, gtt. x. M.

Divide into sixty pills. One to be taken after each meal, particularly for constipation in women.

THOMAS HAWKES TANNER, M. D., F. L. S., LONDON.

609. R. Zinci valerianatis, gr. xij-xxiv
Extracti belladonnæ, gr. iij-vj
Extracti gentianæ, gr. xxiv. M.

Make twelve pills and silver them. One to be taken three times a day in nervous cases of habitual constipation, and in spasmodic contraction of the sphincter ani.

PROF. W. H. VAN BUREN, M. D., OF NEW YORK.

610. R. Extracti aloës, 3ss
 Extracti nucis vomicæ, gr.vj
 Extracti hyoscyami, ʒj
 Pulveris ipecacuanhæ, gr.j. M.

Divide into twenty pills. One to be taken at night.

This recipe, termed the "Pil. salutis," is of special value in the constipation of females.

DR. J. COPLAND, LONDON.

611. R. Potassii bitartratis, ʒj
 Sodii boratis, ʒi ss
 Sulphuris loti, ʒvj
 Confectionis sennæ, ʒi ss
 Syrupi zingiberis, f. ʒvj
 Syrupi, f. ʒij. M.

A teaspoonful or a dessertspoonful of this laxative electuary in the evening, at bedtime.

612. R. Potassii bitartratis, ʒj
 Sulphuris loti, ʒi ss
 Mellis despumati, ʒiij. M.

A teaspoonful once or twice a day, in habitual constipation.

It has been observed that aloes is useful in habitual constipation due to atony of the colon, the result of fever and debilitating diseases, old age or sedentary habits. It may be combined, as indicated, with aromatics, hyoscyamus, ipecacuanha, nux vomica or quinine. Dr. SPENDER recommends (*Medical Times and Gazette*, February 19th, 1870) the following pill:—

613. R. Extracti aloës aq., gr. ss-j
 Ferri sulphatis, gr. iss-ij. M.

For one pill, to be taken thrice daily, immediately after the principal meals, and continued regularly for a few days till the occurrence of the first loose motion, after which one only is to be taken night and morning. At the end of a week or two another pill may be omitted, and within a month a single pill once or twice a week suffices.

Nothing approaching purgative ought ever to be permitted. Profs. METCALF and VAN BUREN both combined aloes with hyoscyamus and nux vomica.

DR. J. CLELAND, EDINBURGH.

This author highly recommends the saccharate of lime. He introduced it, through the *Edinburgh Medical Journal*, August, 1859, to the profession. He prepares it as follows:—

614. R. Slake of quicklime, $\overline{3}\text{viij}$
 Rub up with it of white sugar, $\overline{3}\text{v}$
 Add of water, $\text{f.}\overline{3}\text{xx}$. M.

Stir and filter. The product should be perfectly clear, with only a slightly yellowish tinge. Each ounce, by weight, should contain 18 grains of lime. Dose— $\text{m.}\overline{xv}$ — xxx , or $\text{f.}\overline{3}\text{j}$.

Dr. C. finds this saccharate of lime a very valuable means of overcoming gradually that chronic constipation which so frequently accompanies dyspepsia, and that persons who for years have been the constant habit of using aperient medicines have been able to abandon them, in a great measure, after taking this remedy for some time.

DR. MIALHE, PARIS.

615. R. Sulphuris loti, $\overline{3}\text{jss}$
 Magnesii carbonatis, $\overline{3}\text{v}$
 Mellis despumati, $\overline{3}\text{xv}$. M.

A teaspoonful in the morning before eating.

616. R. Extracti belladonnæ, $\text{gr.}\text{v}$
 Rhei pulveris, aa
 Aloës socotrinæ, $\text{gr.}\overline{xv}$. M.

Divide into twelve pills. One or two in the evening, at bedtime, every other day, in habitual constipation.

617. R. Aloës socotrinæ, aa $\overline{3}\text{j}$
 Rhei pulveris, aa $\overline{3}\text{ss}$
 Pulveris aromatici, $\overline{3}\text{j}$
 Saponis, q. s.
 Syrupi, M.

Divide into sixty pills. Two in the evening, in the habitual constipation of dyspeptics.

Or,

618. R. Aloës socotrinæ, aa $\overline{3}\text{j}$
 Rhei pulveris, aa $\overline{3}\text{j}$
 Ipecacuanhæ pulveris, aa $\overline{3}\text{ss}$. M.
 Saponis, aa $\overline{3}\text{ss}$.

Divide into thirty pills. One or two in the evening.

DR. CONTARET, FRANCE.

619. R. Extracti belladonnæ, aa $\text{gr.}\text{vij}$
 Extracti rhei, q. s.
 Althæa pulveris, M.

Divide into twenty pills. One three hours after dinner, in habitual constipation.

DR. C. PAUL, PARIS.

620. R. Podophyllin, $\text{gr.}\text{v}$
 Mellis, q. s. M.

Divide into ten pills. One at bedtime, in habitual constipation. Podophyllin can be employed for a long time, without losing its efficacy, and its purgative effects are not followed by consecutive constipation.

RÉSUMÉ OF REMEDIES.

Argenti Nitras, in doses of gr.ss-iss daily, reduced to fine powder, and conjoined with Dover's powder in the form of pill, is highly recommended by Dr. Waring and others in the advanced stages of acute dysentery.

Ergotin, in doses of gr.vj in emulsion, or in bland enema (gr.xij-xv), has been used with excellent results by Dr. Gros (*Practitioner*, November, 1868). One of the effects noted under this treatment was the speedy reduction in the quantity of blood voided.

Hydrargyrum, formerly always resorted to, in large doses, in acute dysentery, has now fallen into comparative disuse, except as an occasional aperient, and ipecacuanha has taken its place. Particularly in the asthenic and scorbutic forms of dysentery, mercury in every form should be avoided. If, in exceptional cases of acute dysentery, it be employed, the following formula, for many years very generally used in Southern India, may be given:—

651. R.	<i>Pilulæ hydrargyri</i> ,	gr.ij-iii	
	<i>Pulveris ipecacuanhæ radicis</i> ,	gr.i-ij	
	<i>Opii</i> ,	gr.½.	M.

Make pill. Take one every four or five hours.

The following is also an effectual combination:—

652. R.	<i>Hydrargyri chloridi mitis</i> ,	gr.ss	
	<i>Morphiæ sulphatis</i> ,	gr.½	
	<i>Quiniæ sulphatis</i> ,	gr.ij.	M.

Make pill. Take one every two or three hours.

**Ipecacuanha*, justly called "*radix anti-dysenterica*," is of the highest value in dysentery. Although from its introduction (by Piso, in 1658) its power in this disease has been more or less recognized, it was not, in consequence of the practice of conjoining it with other remedies supposed to possess similar virtues, until 1858 that its real value was demonstrated by Mr. DOCKER (*Lancet*, July and August, 1858), who re-introduced the original plan of Piso and HELVETIUS of giving it alone, in large and effective doses. The following facts now seem to be established: that acute dysentery is more successfully and speedily treated by large doses of ipecacuanha than by other means; that this remedy is more effectual in the acute than in the chronic forms; that large doses (gr xxv-xxx) may be given with perfect safety, without fear of hyperemesis or other ill effects. The mode of treatment, in the main, now generally practiced, is that detailed by Dr. W. C. MACLEAN in the article on dysentery in REYNOLDS' *System of Medicine*, a condensed statement of which has already been given.

Limonis Succus should form an essential part of the treatment when the state of the gums or other circumstances lead to the belief in a scorbutic taint. A mixture of equal parts of lime juice, decoction of cinchona and port wine was employed with good results in the British army in the first Burmese war.

Linum. The infusion of flaxseed is an excellent demulcent.

**Opium* fulfills three important indications:—1. Allaying pain and muscular excitement; 2. Moderating the peristaltic motion of the intestines; and, 3. Promoting the cutaneous secretion. It is considered by Dr. WARING as, on the whole, however, inferior, especially at the onset of an acute attack, to ipecacuanha. A preliminary dose of opium is often of great service in enabling the stomach to retain ipecacuanha

Peri Carbonas has not, in the opinion of Dr. GRAVES, been duly appreciated as a remedy in habitual constipation. He has succeeded in curing with it alone a patient who had long been subject to extreme constipation, and who had been reduced to the necessity of taking an immense dose of purgatives almost every week.

Magnesia Sulphas, in small, frequently-repeated doses, with the addition of a few drops of diluted sulphuric acid, will sometimes subdue obstinate constipation after the failure of other means. Combined with sulphate of iron and bitartrate of potassa, it was a favorite prescription of the late Prof. ROBLEY DUNGLISON.

Nitrici Acidum, in the opinion of Dr. GRAVES, is a very reliable remedy in habitual constipation, and combines tonic with aperient qualities.

Pis Liquida, persevered in for some time, often effectually removes habitual constipation.

Podophyllin is useful when there is torpor of the upper portion of the bowel.

Rheum. Dr. F. W. PAVY recommends the following pill in habitual constipation :—

627. R.	Pilulæ rhei comp.,	gr.ij-iiij	
	Pulveris capsici,	gr.j.	M.

To be taken *with the food*, and repeated daily, as occasion requires.

In the constipation of anæmic females Dr. ASHWELL recommends the following mixture :—

628. R.	Pulveris rhei,		
	Magnesi carbonatis,	ss	3ss
	Confectio aromatica,		gr.xx
	Aquæ cinnamomi,		f.ʒi
	Tincturæ cardamomi compositæ,	f.ʒj.	M.

Make a drink. To be taken at bedtime, every three or four days.

Dr. BIRCH advises it combined with taraxacum and quinine, and Professor DA COSTA combined with belladonna and ginger.

Ricini Oleum is one of the best purgatives which can be employed in habitual constipation, acting speedily, without much griping, and causing less subsequent constipation than any other purgative given to remedy this state.

Senna, particularly in the form of confection, is a mild, efficient purgative, causing little excitement, and leaving no subsequent constipation. Dr. JOHN FORSYTH MEigs combines it with bitartrate of potassa, sulphur, and subcarbonate of iron.

**Nux Vomica* is often of equal benefit. Dr. COPLAND recommends the following pills :—

629. R.	Extracti nucis vomicæ,	gr.iiij	
	Extracti colocynthis compositæ,	ʒii	
	Saponis castiliensis,	gr.xij.	M.

Make twelve pills. Take one every other night for a few weeks.

Veratrum Viride, in doses of gtt.iiij of the tincture four or five times daily, is said (*Practitioner*, November, 1868) to be useful in some cases of obstinate constipation.

Zinci Valerianas is recommended by Dr. TANNER in nervous cases of habitual constipation, combined with belladonna and gentian.

Electricity. Dr. ALTHAUS reports (*Lancet*, November 16th, 1865) several cases of habitual constipation which yielded readily to faradization of the bowels after the failure of other remedies, but in the hands of LACLERC electricity is rarely or never of service in these cases.

cleansed with cotton-wool, and a solution of nitrate of silver, $\mathfrak{z}\text{ij}$, to $\text{f.}\mathfrak{z}\text{j}$ of water, is thoroughly and carefully applied to the ulcerated surface. The treatment causes considerable pain, which should be relieved by morphia hypodermically, and the patient be kept in bed. The improvement is immediate, the movements become less frequent, and the sanguineous discharges cease. In from four days to a week the caustic application should be repeated, which is often sufficient to effect a permanent cure. The following specific directions are given:—

Proceed deliberately and carefully, as in any other surgical procedure. Always etherize the patient, and always stretch the sphincter ani. When properly done, these are both perfectly safe measures. The patient being etherized, the operator is enabled to explore the rectum, and make his applications deliberately and thoroughly. Paralyzing the sphincter is not only necessary to complete any satisfactory explorations, but the quieting influence secured thereby to the rectum can hardly be over-estimated. Put the patient in Sims' position for uterine examinations, and use Sims' vaginal speculum for examining the anterior and lateral walls of the rectum, and the bivalve with hinges on one side for examining the posterior wall.

If much disease is discovered on examination, the surgeon may use nitric acid. If ulceration is superficial, and the mucous membrane not much hypertrophied, the nitrate of silver does well. The patient should be required to remain in bed for a week or two, on a milk and meat diet.

LUCIUS M'GUIRE, M. D., SAN FRANCISCO.

Our author recommends the use of *iron* in chronic dysentery:—

654. R.	Ferri subsulphatis,	$\mathfrak{z}\text{ij}$.	
	Glycerinæ,	$\text{f.}\mathfrak{z}\text{j}$	
	Aquæ,	$\text{f.}\mathfrak{z}\text{vij}$.	M.

One-half to be given as an injection every two hours.

A single injection will often arrest the discharges almost immediately. The doctor has had occasion to try the Monsell salts a number of times as a *dernier resort* in dysentery, and with uniform success.

W. E. WHITEHEAD, M. D., ASSISTANT SURGEON, U. S. A.

Our author recommends *ipecacuanha* in chronic dysentery. He directs the following treatment:—

A *hot salt bath* daily, or several times a week, just before going

to bed; such nourishing food as best agrees; flannel next the skin; a well-ventilated, dry and warm sleeping-room; and

655. R. Pulveris ipecacuanhæ, ʒiij.

For twelve powders. One to be taken morning and evening, on an empty stomach.

As improvement takes place lessen the dose of ipecacuanha to ten grains twice a day, and then to eight grains at bedtime. After the ipecacuanha is stopped, it may be followed with advantage by ten drops of the *muriated tincture of iron* morning and night. Other testimony to the value of ipecacuanha in chronic dysentery has been recently given by Dr. A. A. WOODHULL, U. S. A., and others.

THOMAS HAWKES TANNER, M. D., F. L. S., ETC.

656. R. Cupri sulphatis, ss gr.v
Extracti opii, ʒj. M.
Extracti gentianæ,

For twenty pills. One three times a day in obstinate diarrhœa.

657. R. Argenti nitratis, gr.ss
Extracti opii, gr.ij. M.

Make a pill. To be taken night and morning.

In very obstinate dysenteric diarrhœa, where opium agrees with the system.

RÉSUMÉ OF REMEDIES.

Opium is much less employed in chronic dysentery now than formerly. It may be given in combination with Dover's powder.

* *Argenti Nitras* is of great service in chronic dysentery. It should be given in the same manner as directed for the advanced stage of the acute affection.

Arnica is praised by German authorities in chronic dysentery, when the vital powers are greatly depressed.

Benzoinum has proved successful in the hands of Dr. CHIPPERFIELD, of Madras (*Madras Quarterly Medical Journal*, January, 1867), given as follows:—

658. R. Tincturæ benzonii compositæ, f.ʒj-ij
Tincturæ opii, mxx-xl
Pulveris acaciæ, gr.xxx
Aquæ carui, ad. f.ʒvj. M.

Dose—One-fourth part every four hours.

* *Bismuthi Subnitratis* is highly praised in subacute and chronic dysentery by TROUSSEAU and RÉCAMIER. It is also much employed by Prof. DA COSTA.

Calcei Aqua by the mouth, or by enema, proves useful in some cases.

Carbo Ligni was recommended by Prof. CHAPMAN, who found it, internally administered, to remove the acrid and offensive character of the stools.

Carbonic Acid Gas introduced per anum has been advised.

Cascarilla is highly thought of by the Germans.

Cetraria Islandica, in the form of jelly or decoction, is a valuable tonic and nutritive during convalescence.

**Cupri Sulphas*, combined with opium, is often highly serviceable in chronic dysentery.

Cusparia may be given with advantage in the latter stages.

Fermentum has been recommended for removing the fetor of the stools and diminishing their frequency :—

659. R.	Fermenti,	f.℥x	
	Camphoræ,	gr. xxx	
	Spiritus ætheris nitrosi,	f.℥ss.	M.

A tablespoonful every two or three hours, according to the severity of the symptoms.

Ferri Chloridi Liquor, in doses of gtt. iij.-vij, well diluted with water and syrup, is frequently employed in France. The same doses in enema, combined with opium, are often serviceable.

**Ferri Nitratis Liquor* is of great benefit, particularly in those anæmic from loss of blood and the depraving influence of malaria.

Ferri Subsulphatis Liquor, diluted in enema, has been recommended.

Hæmatoxyllum, in decoction or extract (gr. x-xxx), is an excellent tonic astringent, but inadmissible so long as any active inflammation exists.

Hydrargyrum, excepting very occasionally as a purgative, when there is congestion of the liver, is wholly uncalled for in chronic dysentery.

**Ipecacuanha*, in the form of Dover's powder, is often of the greatest benefit in chronic dysentery, given at bedtime in full dose (gr. x-xij), or in small, frequently-repeated doses, in combination with nitrate of silver.

Jalapa, in the form of pulvis jalapæ compositus, is the best purgative which can be employed in dysentery.

Leptandrin is said to be useful when the stools are destitute of bile and the mucous membrane is irritable.

Nitro-muriaticum Acidum Dilutum, in lotion (f.℥j to aquæ Oj), applied to the abdomen, is of benefit, especially when there is hepatic disease.

**Opium* is of great value in chronic dysentery, and may be given combined with nitrate of silver, sulphate of copper, or sugar of lead.

Plumbi Acetas, though less effectual perhaps than nitrate of silver or sulphate of copper, may be employed at an earlier stage than either of those salts.

Potassii Bitartras is one of the best purgatives which can be employed when laxatives are indicated.

Granati Fructus Cortex, in decoction, occasionally, in the absence of inflammatory action, proves useful.

Quercus Cortex, in decoction, has been recommended in the advanced stages of chronic dysentery.

**Quiniaz Sulphas*, in full doses (not less than ℞j, in solution), should be given in malarial dysentery, and repeated until cinchonism is induced. *Ipecacuanha* should then be given as directed.

Nux Vomica, combined with opium and iron, is worthy of trial when there is much exhaustion.

Sulphur appears to exercise a favorable influence in some cases of chronic dysentery.

Tannin, in combination with opium and ipecacuanha, is often of service.

Truementilla, in decoction, may be given with advantage in the advanced stages of dysentery, after inflammatory action has been subdued.

Zinci Oxidum, in doses of gr.ij-v thrice daily, is recommended by Dr. WARING-CURRAN.

Zinci Sulphas, combined with ipecacuanha and opium, has been employed with success.

Water Belt. Dr. W. C. MACLEAN recommends the use of a water belt over the abdomen for some hours daily. It acts as a fomentation, and the steady, uniform pressure it maintains seems to favor the absorption of the fibrine effused between the intestinal coats. If there be much uneasiness about the anus, a water compress over the part often affords more relief than an opiate enema. The *cold hip-bath* daily, for a few months, is also of service.

DYSPEPSIA.

WM. AITKEN, M. D., EDINBURGH.

660. R. Sodæ bicarbonatis, 3v
Potassæ nitratis, 3j. M.

For twenty powders. Order one two or three times a day in those forms of indigestion marked by excessive acidity and heartburn. At the same time free excretion from the liver and bowels must be sustained by occasional doses of blue pill or podophyllin, combined with extract of colocynth and of henbane, while exercise and diet are duly attended to.

661. R. Ammoniz carbonatis, ʒj
Extracti gentianæ, ʒij. M.

For twenty pills. One thrice daily in weakened digestion from over-fatigue.

662. R. Extracti nucis vomicæ,
Ferri sulphatis, ʒss gr. ss
Extracti colocynthidis compositi, gr. iv. M.

This combination, taken early in the morning, generally induces gentle action of the bowels.

In prescribing the mineral acids, our author calls attention to the following general rule, stated by Dr. BENICE JONES, namely, that the influence of sulphuric acid is astringent, while that of muriatic acid promotes indigestion, and of nitric acid secretion.

THOMAS KING CHAMBERS, M. D., CONSULTING PHYSICIAN AND LECTURER ON THE PRACTICE OF MEDICINE AT ST. MARY'S HOSPITAL, LONDON.

663. R. Acidi hydrocyanici diluti, m℥
Infusi gentianæ, f. ʒvj. M.

A tablespoonful thrice daily in heartburn due to over-sensitiveness.

PROFESSOR ROBINSON, BOWDOIN COLLEGE.

671. R. Extracti cimicifugæ fluidi,
Tincturæ sanguinaris,
Syrupi sarsaparillæ, aa f. ʒj. M.

Dose—One teaspoonful three times daily. Very useful in cardiac palpitation resulting from dyspepsia.

One of the finest preparations in dyspepsia with flatulence is the following:—

672. R. Sulphatis sodæ, ʒj
Tincturæ nucis vomicæ, f. ʒv
Aquæ, f. ʒiv. M.

A teaspoonful thrice daily, after meals.

673. R. Ferri sulphatis exsiccatae,
Extracti hyoscyami, aa ʒj
Extracti nucis vomicæ, ʒj. M.

For sixty pills. Give one half an hour before each meal, three times daily, in water.

674. R. Ferri redacti, gr. xxxvj-ʒj
Pepsinæ, gr. xxxvj
Zinci phosphatis, gr. xvij
Glycerinæ, q. s. M.

Divide into twenty-four pills, silver them, and order two to be taken every day at dinner.

In anæmia, etc., with weakness of the digestive organs.

PROF. T. GAILLARD THOMAS, NEW YORK.

675. R. Magnesie sulphatis, ʒij
Ferri sulphatis, gr. xvj
Acidi sulphurici diluti, f. ʒj
Aquæ, Oj. M.

Two tablespoonfuls in a tumbler of ice-water every morning upon rising, when a ferruginous tonic, combined with a saline, is indicated.

Or,

676. R. Potassæ et sodæ tartratis, ʒij
Vini ferri amari, f. ʒij
Acidi tartaraci, ʒiij
Aquæ, f. ʒxij. M.

Two tablespoonfuls in a tumbler of ice-water before breakfast. Should this dose be not sufficient, two or three may be taken daily, for the result will prove tonic and reparative as well as cathartic.

677. R. One rennet, washed and chopped.
Vini rubri, Oj. M.

Macerate for twelve days, and then decant, filter, and add:—

- Acidi nitro-muriatici diluti, f ʒij
Tincturæ nucis vomicæ, f. ʒij
Bismuthi subnitratæ, ʒij. M.

One tablespoonful in a quarter of a tumbler of water before each meal, as a digestive tonic.

ble, as a rule, especially when the aperient is often repeated, the liquid aperients, especially the saline, often acting injuriously on an irritable stomach. Castor oil, however, is in many constitutions an exception to this rule.

PROF. FONSSAGRIVES, MONTPELLIER, FRANCE.

679. R. Magnesiae, 3j
Liquor calcis,
Aque destillatæ, aa f.3ij
Syrupi aurantii florum, f.3j. M.

A tablespoonful from time to time, in the intestinal colic of dyspepsia ; cold enemata of the infusion of chamomile.

680. R. Potassii bicarbonatis, 3j
Tincturæ cardamomi compositæ,
Tincturæ rhei, aa f.3ij
Spiritus ammoniæ aromatici, f.3j
Aque menthæ piperitæ, f.3iijss
Syrupi aurantii corticis, f.3j. M.

Take two tablespoonfuls half an hour before each of the two principal meals, in flatulent dyspepsia.

DR. PARIS, PARIS.

681. R. Magnesiae, 3ss
Spiritus lavandulæ compositi, f.3ss
Spiritus cari, f.3iijss
Syrupi zingiberis, f.3iij
Aque menthæ piperitæ, f.3ij. M.

Take one-half after the meal, when the digestion is accompanied with an abundant development of gas.

682. R. Bismuthi subnitratæ,
Cinchonæ floræ pulveris, aa gr.xxv
Calumbæ pulveris, gr.xv
Opii pulveris, gr.vj. M.

Divide into ten powders. One an hour after each of the two principal meals, when there is atony of the stomach and pain during digestion.

DR. BONNET, PARIS.

683. R. Bismuthi subnitratæ, 3v
Morphiæ muriatis, gr.½-iss. M.

Mix carefully and divide into twenty powders. One immediately after each of the two principal meals, in two tablespoonfuls of sweetened water, in dyspepsia with a tendency to diarrhœa.

DR. GUIPON, FRANCE.

684. R. Potassii bitartratis, 3iij
Magnesiæ, 3j-ij
Jalapæ pulveris, gr.xv-xxx. M.

As a purgative in some cases of chronic dyspepsia ; to be given in one dose.

DR. MAYET, FRANCE.

685. R.	Canellæ pulveris,	3ijss	
	Piperis,		
	Cardamomi,	aa.	3es
	Cinchonæ,		3j
	Kramerix,		3v
	Lunel wine,	Oij.	M.

Bruise these substances and macerate them in the wine during several days; then filter. A wineglassful morning and evening, to give tone to the stomach.

SWEDISH PHARMACOPŒIA.

686. R.	Sennæ,	3iv	
	Coriandri seminis,		
	Fœniculi seminis,	aa	3ij
	Vini serici,		Oij.

Bruise the senna leaves and the seeds, digest three days in the wine and add:—

Raisins,	3iij.
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Macerate twenty-four hours and filter. A wineglassful in the morning, on an empty stomach, as a laxative and carminative, in flatulent dyspepsia.

DR. VANCE, FRANCE.

687. R.	Extracti colocynthidis compositi,	3iv	
	Scammonii,	3j	
	Extracti rhei,	gr.xj	
	Saponis,	gr.ivss.	
	Spiritus canellæ,	gtt.iv.	M.

Divide into twenty-four pills. One or two in the morning, on an empty stomach, to provoke bilious stools and increase the appetite.

RÉSUMÉ OF REMEDIES.

Aloes, in doses of gr.ij-iv, combined with ipecacuanha (gr.j-ij), two or three times a week, is useful in the dyspepsia of persons of a relaxed habit, or those debilitated by long illness, especially if it be probable that the duodenum is implicated.

Ammonii Carbonas is prescribed by Dr. AITKEN in weakened digestion from over-fatigue.

**Argenti Nitras* is useful in many obstinate cases of dyspepsia attended with morbid sensibility and hypochondriasis. The following formula may be used:—

688. R.	Argenti nitratis,	gr.ss	
	Extracti hyoscyami,	gr.ij-iv.	M.

Make pill. Take every night.

The quantity of the nitrate may be gradually increased to grs.ij-ijj daily, and this may be continued with safety for six or eight weeks, but not beyond that time. It may sometimes be advantageously combined with small doses of quinine. The diet should be carefully directed. Or the nitrate may be given in solution:—

hydrocyanicum Acidum Dilutum is a highly useful remedy, which may be given in combination with bismuth.

psine sometimes affords relief in the severest cases of gastralgia.

GASTRITIS.

DR. A. L. COX, OF NEW YORK.

708. R. Nucis vomicæ pulveris, ʒss
Argenti oxidi, gr.xv
Extracti gentianæ, ʒiss. M.

Divide into forty pills. One thrice daily in chronic gastritis.

709. R. Bismuthi subnitratæ, ʒj
Calumbæ pulveris, ʒiij
Acaciæ, ʒij. M.

Divide into twenty lobules. One thrice daily in chronic gastritis.

710. R. Magnesiæ, gr.vii
Sodæ bicarbonatis, ss
Canellæ pulveris, gr.iv. M.

Divide into six powders, of which give one several times a day to children, where dejections are green and acid.

J. M. DA COSTA, M. D., PHILADELPHIA.

711. R. Bismuthi subnitratæ, gr.x-xxx.
Sodæ bicarbonatis, gr.x. M.

For one powder, to be taken after meals, when there is acidity.

712. R. Bismuthi subnitratæ, ʒss
Acidi hydrocyanici diluti, m.xxiv
Misturæ acaciæ, f.ʒiij. M.

A teaspoonful after meals.

When there is pyrosis, the following is useful:—

713. R. Olei succini rectificatæ, f.ʒss
Misturæ acaciæ, f.ʒijss. M.

Teaspoonful after meals.

RÉSUMÉ OF REMEDIES.

Argenti Nitras is one of the most effectual remedies in chronic gastritis. The injection into the stomach of the crystallized nitrate, dissolved in distilled water, has been advised.

Bismuthi Subnitras is especially useful in the milder forms of gastric inflammation.

Drargyrum. Mercurial purgatives are excellent remedies in acute gastritis. Three to four grains of calomel, followed by castor-oil or a saline, may be given to an adult, vigorous patient. Blue pill, with a little colocynth and ipecacuanha, followed by seidlitz powder, may be given when active effects are undesirable.

**Hydrocyanicum Acidum Dilutum* is often serviceable in subacute gastritis, given in an ordinary effervescing draught. Prof. DA COSTA sometimes combines it with bismuth.

Morphia is a valuable palliative in chronic gastritis, though generally considered inferior to hydrocyanic acid. Drs. BARDSLEY and STOKES advise it in doses of gr. $\frac{1}{12}$, twice the first day, three times the second, and so increasing the quantity until the patient takes one to one and a half grains in the twenty-four hours. When there was an abundant secretion of mucus, it was found particularly serviceable.

Opium is recommended by Dr. WILSON FOX in subacute inflammation of the stomach, when great nervous irritability and atony co-exist, in which cases it may often be combined with nitrate of silver.

**Turpentine*, applied hot in stupes, is of great benefit.

GASTRIC ULCER.

PROF. H. ZIEMSEN, OF ERLANGEN.

This writer (*Medicinische Central Zeitung*, April, 1872) recommends the use of alkalies, especially Carlsbad water, continued several months. Most vegetable, and fatty, and saccharine matters are injurious. A *milk diet* has proved of benefit in numerous instances; but veal, chicken, ham, white bread and light claret are harmless. *Morphia*, hypodermically, must be employed to combat the cramps in the stomach.

J. M. DA COSTA, M. D., PHILADELPHIA.

714. R.	Argenti nitratis,	gr.v	
	Extracti opii,	gr.x.	M.

For twenty pills. One thrice daily.

The following is an excellent combination for the pain and vomiting, when opium is inadmissible:—

715. R.	Bismuthi subnitratis,	ʒij	
	Acidi hydrocynaci diluti,	f.ʒss	
	Mucilag. acaciæ,		
	Aquæ menthæ piperitæ,	aa	f.ʒij. M.

A tablespoonful thrice daily.

RÉSUMÉ OF REMEDIES.

Argenti Nitras, though generally considered of value in ulcer of the stomach, is believed by Dr. W. BRINTON to be, as generally prescribed, absolutely inert, so far as the gastric ulcer is concerned. He prefers bismuth. Professor DA COSTA sometimes prescribes the nitrate with opium.

which unfortunately is frequently not the case with that which is generally dispensed.

Magnesiæ Sulphas, in small doses, has been found very effectual in dyspepsia accompanied by costiveness. The following formula may be used:—

693. R.	Magnesiæ sulphatis,	℥j	
	Infusi quassiae,	℥iiss	
	Spiritus ammoniæ aromatici,	f.℥ij.	M.

Drink a wineglassful of this every morning, fasting.

Or the following may be employed:—

694. R.	Magnesiæ sulphatis,	℥vj	
	Magnesiæ carbonatis,	℥iiss	
	Vini aloës,	f.℥vj	
	Tincturæ humuli,	f.℥ij	
	Acidi hydrocyanici diluti,	℥xv	
	Infusi cascarillæ,	f.℥vij.	M.

Take three tablespoonfuls thrice daily.

Manganisii oxidum nigrum, in doses of gr.x-xv thrice daily, has been recommended in certain irritable conditions of the stomach and forms of dyspepsia.

Morphia, subcutaneously injected, in doses of one-fourth grain, has been used with excellent success by Dr. CLIFFORD ALLBUTT (*Practitioner*, June, 1869) in those forms of dyspepsia characterized by irritability or erethism, or such as is often associated with hysteria, or which arises from great mental exertion or depression.

Muriaticum Acidum Dilutum, in doses of ℥.xv-xx, properly diluted, given immediately before, during, or directly after a meal, is highly recommended by Dr. WILSON FOX in atonic dyspepsia. It may be combined with vegetable bitters. In nervous disorder of digestion associated with diarrhœa he combines the acid with tincture of *nux vomica*, and gives before meals.

Pepsine is especially indicated in dyspepsia connected with deficient secretion of gastric juice. It is particularly useful in gastric disturbances following the use of animal food, often enabling a patient who has not dared attempt it, to eat of it with impunity. The severest cases of *gastralgia* are relieved by it. If it fails after three or more doses, it is probable that the dyspepsia does not arise from a defect of the gastric secretion. Dr. WILSON FOX strongly recommends it, not only in atonic dyspepsia, but in irritative states of the gastric mucous membrane. It may be advantageously combined with muriatic acid at meal-times (a similar combination is recommended by Prof. DA COSTA). It may be combined with other medicines which do not impede its therapeutic action; thus, with muriate of morphia, to relieve violent pain of the stomach; with strychnia, to stimulate peristaltic movement; with subnitrate of bismuth, lactate or iodide of iron, etc.

Potassii Sulphuretum, in doses of gr.x, alone or combined with an aromatic, is useful when the mucous follicles are supposed to be implicated.

Potassii Sulphas, in doses of gr.xv-℥ij, alone or combined with rhubarb (gr.v-x) or aloes, is a safe and efficient aperient in dyspeptic affections.

Potassii Tartras is sometimes employed as a mild purgative in dyspeptic affections, attended with slight febrile action.

Potassii Iodidum, in small doses (gr.j-ij), with bicarbonate of potash (gr.vij-x), is recommended by Dr. W. BRINTON in flatulent dyspepsia, in which, whether from a too starchy diet, deficient or hasty mastication, decayed teeth, the abuse of tobacco or other causes, the salivary excre-

tion seems either deficient in quantity or faulty (*i. e.*, acid) in quality. Two or three administrations will often induce a marked change.

Quassia, in infusion, combined with carbonate of soda, is recommended by TROUSSEAU in dyspepsia attended by acidity of the stomach, sour eructations, and marked especially by vertigo and a tendency to syncope. It is peculiarly useful in the dyspepsia of drunkards.

* *Rheum* is often highly serviceable, as it is warm and carminative in its nature, speedy, and neither stimulant nor drastic in its action. Eight grains made into pills with soap, and taken every night at bedtime, together with some mild bitter infusion, and an alkali in the daytime, is a very effectual mode of treatment. The following mixture is useful:—

695. R.	Aloës,	3j	
	Rhei,		
	Glycyrrhizæ,	ss	3ss
	Spiritus lavandulæ compositus,	f. 3ss	
	Aquæ calcis,	f. 3vij.	M.

Infuse for twelve hours and strain. Dose—Two tablespoonfuls two or three times daily.

The following formula is of benefit when acidity is a prominent symptom:—

696. R.	Rhei,	3iss	
	Potassæ carbonatis,	3ij	
	Aquæ ferventis,	f. 3xij.	M.
Macerate for twelve hours, strain and add:—			
	Tincturæ cinnamomi compositus,	f. 3ij.	M.
Dose—A tablespoonful to a wineglassful.			

The old plan of chewing a piece of solid rhubarb is an excellent one, as by this means no more is swallowed than what is dissolved in the saliva, and this is frequently sufficient to keep the bowels regular, and impart tone to the digestive organs without producing subsequent constipation. Professor DA COSTA sometimes combines it with quinine.

* *Ricini Oleum*, in doses of a teaspoonful daily, given at bedtime, is one of the most valuable remedies in dyspepsia attended with inflammation or vascular excitement of the pylorus and duodenum. The nature of the morbid condition of the mucous membrane of the stomach is indicated by the effects of castor oil. In atonic dyspepsia it is borne with the greatest difficulty, causing nausea and vomiting; in irritable dyspepsia it acts severely, and with much griping; but in vascular excitement of the mucous membrane of the stomach it soothes most admirably, and produces the best effects when it has no aperient action. It may be combined with liquor potassæ, or administered in emulsion, in coffee, or in a mild carminative water.

Sapo, in combination with rhubarb and an essential oil, is useful in dyspepsia attended with acidity; also in *pyrosis*, given either alone or with opium.

Senna. A mixture of equal parts of the infusions of senna and gentian is often beneficial in atonic dyspepsia, especially when attended by constipation.

Serpentaria is recommended by Dr. A. T. THOMSON in dyspepsia when the skin is hot and dry.

Sinapis. White mustard seeds, in doses of two or three teaspoonfuls two or three times a day, have been advised in some forms of dyspepsia.

**Sodii Bicarbonas*, in full doses (ʒij-iiij), combined with tincture of ginger (℥xxx) and aromatic spirits of ammonia (f.ʒss-ʒ), is very useful in dyspeptic attacks attended with colic and gastric irritability, especially when consequent on the ingestion of unwholesome food. Dr. AITKEN combines it with nitrate of potash when there is excessive acidity and heartburn.

Sodii Hyposulphitis is praised by Sir W. JENNER and Dr. W. BRINTON in flatulent dyspepsia. In doses of gr.x-xv, in infusion of quassia, it has proved successful in *saracina ventriculi*.

**Strychnia* or *Nux Vomica* is useful in chronic dyspepsia in preventing distention by flatus. It is also serviceable in *pyrosis* and *heartburn*.

Tannic Acid, which may advantageously be combined with dilute nitric acid, is often very serviceable in dyspepsia, the symptoms disappearing under its use, the appetite improving, and the bowels, far from being constipated, often becoming more free.

Tarazacum is much used where the liver is implicated, and in the indigestion of gouty subjects. The following formula may be employed:—

697. R.	Extracti taraxaci,	ʒij	
	Potassii nitratis,	ʒss	
	Spiritus ætheris nitrosi,	f.ʒj	
	Infusi aurantii,	f.ʒvj.	M.

Take two tablespoonfuls thrice daily.

Zinci Sulphas is recommended by Dr. GOLDING BIRD in dyspepsia associated with irritability of the nervous system.

Zinci Oxidum has, according to Dr. WILSON FOX, the advantage over the sulphate in irritable conditions of the nervous system associated with dyspepsia, when given at bedtime, in doses of gr.ij-iiij for procuring sleep.

GASTRALGIA.

PROF. F. NIEMEYER.

698. R.	Tincturæ nucis vomicæ,		
	Tincturæ castorei,	aa	f.ʒj. M.

Twelve drops during the attack of gastralgia, in a small cupful of infusion of valerian. Warm applications to the epigastrium.

DR. GALLARD, PARIS.

699. R.	Morphiæ muriatis,	gr.iss	
	Aquæ lauro-cerasi,	f.ʒiss.	M.

One drop on a piece of sugar, immediately after each meal, to persons affected with gastralgia.

700. R.	Tincturæ aconiti,	℥xl	
	Sodii carbonatis,	ʒiv	
	Magnesiæ sulphatis,	ʒiss	
	Aquæ,	f.ʒv.	M.

A tablespoonful to relieve the pains of gastralgia.

liver, the *mineral acids* may be employed. Or, when the case is not chronic, the salts of soda, as in the following formula:—

720. R.	Sodæ bicarbonatis,	℥ss	
	Infusi gentianæ,	f.℥vj.	M.

A tablespoonful three times a day, after or between meals.

Should this fail, employ *nitro-muriatic acid baths*. *Sulphur baths* are of advantage; or those of *sulphuret of potassium*; or the use of *sulphur ointment*, followed by warm baths.

SIR RANALD MARTIN, LONDON.

Nitro-muriaticum acidum is employed, both externally and internally, with great advantage in chronic hepatitis, and in the advanced stages of acute hepatitis and congestion of the liver. It is most serviceable in the form of a *bath*, for which the following directions are given (*Lancet*, December 9th, 1865) by Sir RANALD MARTIN:—1. The proportions of acid are given by the following formula:—

721. R.	Acidi muriatici,	f.℥iij	
	Acidi nitrici,	f.℥ij	
	Aquæ,	f.℥v.	M.

2. Two gallons of water (about ten bottles) may suffice for a bath.
3. To each gallon of water add f.℥iij of the above acid mixture.
4. The bath thus prepared will keep in use for three days, by adding f.℥ss of the acid mixture and Oj of water, morning and evening, to make up for the waste by evaporation.
5. A portion only of the bath to be heated for use, after which it is to be added to the remainder, so as to make the whole of a comfortable warmth (96°–98°).
6. Let both feet be placed in the bath, while the inside of the legs and thighs, the right side (over the liver), and inside of both arms, are sponged alternately. This should be continued for ten or fifteen minutes, morning and evening.
7. While using the bath, a gentle aperient should be taken every morning.
8. Earthenware or wooden vessels should be preferred for foot-baths, and all the sponges and towels should be kept in cold water, as the acid corrodes them.
9. In urgent cases, a general bath, to envelope the whole body, may be used.
10. If the acid bath create much irritation of the skin, the quantity of the acid may be diminished.
11. The influence of the acid is not in the least degree counteracted by opium, even when exhibited in the largest doses.

RÉSUMÉ OF REMEDIES.

Colchicum is advised by Dr. COPLAND, to increase the biliary secretion in chronic inflammation or enlargement of the liver, and to promote the resolution of the former and the diminution of the latter state.

Hydrargyri Bromidum has been administered with relief in chronic hepatitis with enlargement.

Hydrargyri Iodidum Rubrum, in ointment, is recommended by Dr. W. C. MACLEAN in malarial enlargements of the liver and spleen, to be rubbed in for ten minutes in the morning, and the patient exposed to the powerful heat of a fire as long as he can endure it.

Hydrargyri Chloridum Mite. Mercury is much less employed than formerly in chronic hepatic affections, it having been superseded by nitro-muriatic acid and iodide of potassium.

Iodine and its preparations are beneficial in chronic hepatic affections, but their indiscriminate use is to be avoided.

Nitricum Acidum, with sarsaparilla or taraxacum, is often productive of good in chronic hepatitis, especially of old persons, where mercurials have been largely used. Nitro-muriatic fomentations and baths may be employed at the same time.

* *Potassii Iodidum*, combined with taraxacum, is of value in chronic inflammation and enlargement of the liver. Dr. COPLAND has found that it is chiefly when enlargement, obstruction or torpor of the liver occurs after periodic fevers, or in the scrofulous diathesis, that iodide of potassium, employed internally or externally, or both, and in conjunction with other deobstruents, as liquor potassæ, or alternated with purgatives, is of most benefit.

* *Taraxacum* is an efficient remedy in chronic inflammation of the liver; where mercury is advisable, rendering it more efficient, and under certain circumstances taking its place advantageously. Sir RANALD MARTIN has found in indolent enlargements of the liver, accompanied with torpid action of the viscus, that mercury is of little service, and that he has derived more advantage from the following formula, conjoined with a spare diet and the external application of cantharides:—

722. R.	Extracti taraxaci,	gr. xxxvj	
	Extracti albes,	gr. xij	
	Extracti acetici colchici,		
	Pulveris ipecacuanhæ,	ss	gr. vj. M.

Make twelve pills. Take two every night.

JAUNDICE.

ROBERTS BARTHOLOW, M. D., CINCINNATI.

Excellent results have been obtained by this practitioner in malarial and catarrhal jaundice by the use of manganese:—

723. R.	Chinoidin,	ʒi	
	Manganesii sulphatis exsiccatae,	ʒij.	M.

For twenty pills. One three times a day, in malarial jaundice.

RESUMÉ OF REMEDIES.

has been used with benefit in jaundice.

ionii Chloridum, in doses of gr.xx every five hours, has, in the hands of Dr. ANSTIE, restored the biliary secretion, in a few doses, when it had been suppressed by a powerful nervous shock or mental perturbation. In his opinion it is one of the most powerful of all biliary functional restoratives.

oicum Acidum has recently attracted attention as a remedy in jaundice due to suppression of the biliary secretion.

icum, in small doses, combined with mild mercurials, or soap, or alkalis, or with magnesia or the neutral salts, according to circumstances, has been prescribed by Dr. COPLAND with benefit. It must be continued for a considerable time, and carefully watched. If there be much debility, or if it produce depression, it should be combined with camphor.

r, from its power of dissolving cholesterine and its anti-spasmodic properties, has been recommended as an internal remedy in jaundice depending on the presence of gall-stones.

rargyri Chloridum Mite. Jaundice sometimes yields rapidly to a calomel purgative (gr.v), followed by a saline, which, however, proves useless when the affection is connected with obstruction by gall-stones, or organic diseases of the liver.

nesii sulphas. The following formula is sometimes useful in severe forms of jaundice :—

229. R.	Magnesii sulphatis,	3ss-j	
	Magnesii carbonatis,	gr.xv	
	Spiritus ammonii aromatici,	℥xxx	
	Aquæ,	f.ʒx.	M.

Make a drink. Take thrice daily.

o-muriaticum Acidum Dilutum is useful both internally and externally, in the form of a bath. It is contra-indicated if there be inflammatory action present.

dophyllin is often a very reliable remedy in jaundice.

nesii Chloras, combined with carbonate of soda, is useful in chronic or asthenic jaundice, accompanied by a torpid state of the liver.

nesii Sulphas is recommended by Dr. A. T. THOMSON as more useful than other saline purgatives in jaundice.

guinaria, in the form of the powder (gr.ij-v), or the infusion, has been employed with advantage in jaundice and torpor of the liver.

azacum, combined with small doses of colchicum, has been found serviceable in jaundice depending upon hepatic disease.

thartics. Dr. GROSS states that in jaundice depending upon hepatic derangement, after bilious evacuations have been produced, an active aperient, every second or third day, for the space of ten days or a fortnight, should never be omitted, so as to carry off the remains of the disease, and prevent a relapse. This is a simple but successful practice which should not be neglected.

are preferable to preparations of cinchona. Arsenic suits some patients. *Opium* is contra-indicated except in those functional hepatic troubles which arise in diabetes.

RÉSUMÉ OF REMEDIES.

Ammonii Chloridum is worthy of trial when there is want of biliary action.

Hydrargyri Pilula. Abernethy's practice, in bilious derangements, of giving, almost indiscriminately, five grains of blue pill at night and a senna draught in the morning, is still continued by many practitioners.

**Ipecacuanha*, in small and long-continued doses, is frequently productive of great benefit in functional derangement of the liver.

Iridin is a cholagogue aperient, gentler in its action than podophyllin. It is very useful in a sluggish state of the bowels arising from torpidity of the liver, or when the stools are pale, particularly in the intervals of overt attacks in gouty persons.

Leptandrin is useful in torpidity of the liver, in which case it is said to be a valuable adjunct to podophyllin and iridin.

**Podophyllin* is now much employed in torpor of the liver.

Sanguinaria has been used with evident advantage in torpidity of the liver, the powder (gr.ij-v) or infusion being preferred to the tincture.

Senna, in infusion (f.℥j-iiij), either alone or combined with sulphate of magnesia (℥ij-iv) or tartrate of potash (℥ij-℥ij), is an efficient purgative in bilious derangements.

**Taraxacum* is a valuable remedy in torpor of the liver.

Turkish Baths are sometimes of great advantage as excitants of the liver.

PYROSIS.

PROF. PIORRY, PARIS.

731. R.	Sodii bicarbonatis,	℥iiss	
	Aquæ destillatæ,		
	Syrupi aurantii florum,	ss	f.℥j
	Olei anisi,		gtt.j. M.

For one dose, in pyrosis.

732. R.	Quinise sulphatis,	gr.xxij	
	Pepsinæ,	℥vss	
	Extracti absinthii,	q. s.	M.

Divide into forty pills. Two before each meal, in functional derangements of the stomach, particularly pyrosis, flatulence and gastralgia after eating.

733. R.	Sodii bicarbonatis,	gr.xiv	
	Tincturæ columbæ,	f.℥j	
	Aquæ destillatæ,	f.℥ij	
	Syrupi gentianæ,	f.℥j.	M.

To be taken during the day, in the same manner as the above formula.

Tannicum Acidum, in from gr.xxx-lx per day, has been advised in the anasarca accompanying albuminuria.

Tiglii Oleum is one of the best hydragogue cathartics which can be given in albuminuria, as it produces copious evacuations with less sickness and discomfort than elaterium.

BRIGHT'S DISEASE.

ALFRED L. LOOMIS, M. D., OF NEW YORK.

This author is convinced that the diaphoretic and cathartic plan of treatment is wrong, and its apparently good results deceptive, and prefers the following:—

In the acute stage of parenchymatous nephritis, whatever may have been the exciting cause, the patient must be kept in bed, in a large, well-ventilated apartment, with a temperature of 75° Fah.; milk should be his only article of diet. Dry cups should be applied over the kidneys, followed by poultices of digitalis leaves, and the infusion of digitalis leaves should be administered at the rate of half an ounce every two hours for twenty-four hours, after which it may be continued at longer intervals, so long as uræmic symptoms are urgent. When the flow of urine commences, the digitalis should be discontinued, and diluent drinks freely administered to keep up the diuresis. If renal secretion is not restored within twenty-four hours after the commencement of this treatment, warm baths, or hot air baths, should be used in addition; and if the symptoms remain urgent, hydragogue cathartics may be given.

In the later stages, those commonly known as chronic Bright's disease, the plan of treatment is essentially tonic. Iron and cod-liver oil are the two great remedial agents, and should be daily administered if they do not disturb the stomach. Milk should be the principal article of diet, and the patient should seek a warm and equable climate. The milk may be taken cold or hot, from a half pint to a pint at a time. Wine, in moderation, may be taken with the food. No depletory remedies should be employed in this stage, except in times of an emergency, when, from some sudden renal congestion, the remaining healthy portion of the kidney is impaired, and active uræmic symptoms present themselves. At such times, a hot air bath, hydragogue cathartics, or stimulating diuretics are to be employed, but with great caution.

Gallicum Acidum is of benefit in cases accompanied by organic disease of the stomach, or by disease of the liver.

* *Kino Pulvis Compositus* is said by Sir T. WATSON to be an admirable remedy in this affection, in doses of gr.x thrice daily.

Liquor Ferri Nitratis, in doses of gtt.x-xv thrice daily, is useful in those cases where tonics and astringents are indicated.

Lupuli Extractum has been found serviceable.

Magnesiae Carbonas is occasionally an effectual remedy.

* *Nux Vomica* is very useful in many cases. Dr. BARLOW recommends the following formula :—

740. R.	Extracti nucis vomicae,	gr.iss	
	Argenti nitratis,	gr.ij	
	Extracti lupuli,	gr.xij.	M.

Divide into six pills. One thrice daily.

* *Opium*, in combination with gentian, frequently affords speedy relief.

* *Sulphurosum Acidum*, in the hands of Dr. LAWSON (*Practitioner*, September, 1868), has produced the best effects, in doses of f.3ss-j thrice daily, shortly before meals, in plain distilled water.

VOMITING.

RÉSUMÉ OF REMEDIES.

Ammonii Citras has been recommended in the vomiting attendant on ulcer of the stomach, but Dr. W. BRINTON considers that the salts of ammonia do more harm than good in these cases.

Ammonii Chloridum is said to relieve the vomiting attendant on scirrhus of the stomach more promptly and uniformly than any other remedy.

Armoracia Radix. Dr. TILT recommends, in vomiting connected with uterine affections, a small portion of horse-radish scraped and moistened with vinegar.

Arseniosum Acidum, in the form of Fowler's solution, is advised by Dr. RINGER, in the morning vomiting of drunkards.

Bismuthi Subnitras, especially when combined with hydrocyanic acid, often speedily allays vomiting in connection with stomach diseases, but in sympathetic vomiting (e. g., from uterine disorder) it has little or no effect.

Calcis Aquæ sometimes succeeds when hydrocyanic acid and other remedies fail. It has less influence on sympathetic vomiting than on that connected with functional derangement of the stomach.

* *Calumba* is useful in many forms of vomiting, especially in that of pregnancy. Its efficacy is greatly increased by combination with hydrocyanic acid.

Carbolicum Acidum, in drop doses of the crystallized acid liquefied by heat, in mucilage, thrice daily, is recommended (*British Medical Journal*, March 13th, 1869) in the vomiting of pregnancy and other forms of sympathetic vomiting.

Carbonic Acid, in the form of an effervescing draught, is often an effective remedy.

Cerii Oxalas appears to be an uncertain remedy, but is sometimes effective in the sickness and vomiting of uterine disease.

**Chloroform*, in doses of a few drops, is often very useful in obstinate vomiting. Sir C. Locock recommends (*British Medical Journal*, August 22d, 1868) chloroformization, almost to insensibility, in obstinate vomiting of pregnancy.

Cinnamomum in aqueous infusion is often of benefit in continued nausea and vomiting.

Creasotum is considered by many as an overrated remedy in vomiting. Dr. RINGER considers the principal cause of its failure as due to its being given in too large doses. He obtains the best effects by adding just sufficient creasote to water to make it taste distinctly, but not strongly of the medicine, and administering of this a dessertspoonful frequently. He finds it effectual given in this manner, in allaying nausea and retching, though some consider it to have less power over actual vomiting.

**Hydrocyanicum Acidum*, given in an effervescing draught, is a very efficient remedy in vomiting arising from any morbid conditions.

**Ipecacuanha* is considered by Dr. RINGER to have few equals in checking some forms of vomiting. In numerous instances he has found drop doses of the wine, administered every hour or thrice daily, according to the urgency of the case, check vomiting of pregnancy, the morning vomiting of drunkards, the vomiting which accompanies general weakness after acute diseases, and that of acute catarrh of the stomach, in children. That form of vomiting after meals in which there is no nausea or pain, or even discomfort, is quickly stopped by these small doses of ipecacuanha. Even in vomiting from cancer of the stomach he has sometimes succeeded with it after the failure of other remedies. Dr. C. D. PHILLIPS states (*Practitioner*, November, 1869) that its beneficial operation is clearly discernible in most cases of continued and obstinate retching, or vomiting where the stomach is not primarily affected, but disturbed by sympathy with some other organ or part of the body, whether the primary affection be acute or chronic. Dr. C. FULLER bears testimony also (*Lancet*, December 4th, 1869) to its value in the vomiting of pregnancy. He found single drops of the wine in a teaspoonful of water every hour, to arrest obstinate vomiting in the course of two days. But it failed in his hands in the treatment of vomiting of drunkards.

Magnesia, in doses of gr.xv-xx, is sometimes given with advantage in sympathetic vomiting.

Magnesi Carbonas also occasionally affords relief in sympathetic vomiting, especially in that of pregnancy.

Opium. A few drops of laudanum, given in beef-tea, as an enema, and repeated as necessary, is sometimes useful in the vomiting of pregnancy. Dr. GRAILY HEWITT recommends in those cases an opiate liniment rubbed over the hypogastric region, or morphia applied endermically. Hypodermic injections of morphia are also serviceable.

Sodii Carbonas is beneficial in vomiting arising from acidity of the stomach.

Nux Vomica, in the form of the tincture, is recommended in the vomiting of pregnancy. Dr. DOUGLAS POWELL states (*Practitioner*, November, 1868) that the tincture, in doses of ℥x, will often arrest the vomiting of phthisis. Dr. BARLOW recommends, in vomiting connected with malignant disease of the stomach, the following formula:—

741. R.	Extracti nucis vomicæ,	gr.j	
	Extracti conii,	gr.xij.	M.
Make six pills. Take one three times a day.			

Strychnia. Dr. TILT recommends, in vomiting connected with uterine disease, the following formula:—

742.	R.	Strychniæ,	gr. ʒ	
		Tincturæ zingiberis,	f. ʒvj	
		Aquæ,	f. ʒiv.	M.

Dose—A teaspoonful every one or two hours.

Sulphurous Acid, in doses of ℥xxx thrice daily has been employed by Dr. DRYSDALE, with success (*Lancet*, July 24th, 1869) in constant vomiting and eructation.

Tartaricum Acidum, in effervescing draughts, sometimes succeeds in allaying vomiting.

Blisters. A small blister over the epigastric region frequently effectually checks vomiting arising from functional or nervous disorder of the stomach, and also that consequent on fevers.

Ice in lumps, or minute quantities of iced brandy and water, or champagne, given every hour, is useful in severe vomiting attendant on pregnancy or uterine disease.

Leeches. Dr. TILT states that in vomiting connected with uterine affections, after the failure of ordinary measures, he has, on several occasions, seen it suddenly checked by the application of six leeches to the pit of the stomach, although there was no sign of inflammation there, and the patient's debility was such as not to justify loss of blood. The same procedure sometimes succeeds in idiopathic vomiting.

effects. The free use of buttermilk, conjoined with the employment of cream of tartar and small doses of Dover's powders, will prove serviceable.

The drastic cathartics should only be resorted to in cases of extreme need, since the patient is liable to be affected by them, and since, by their persistent use, the digestion becomes impaired. Those most frequently employed are colocynth and

764. R. Elaterii, gr. $\frac{1}{4}$ -ss.
For one dose, as occasion requires.

THOMAS HAWKES TANNER, M. D., ETC., LONDON.

765. R. Salacini, ℥ij
Glycerinæ, f. ℥j
Tincturæ aurantii corticis, f. ℥ij. M.
A teaspoonful in a wineglassful of water, night and morning.

Often useful in imparting a temporary sense of renovation.
So also is,

766. R. Ferri et ammoniæ citratis, ℥ss
Spiritus vini gallici, f. ℥j
Vini pepsinæ, f. ℥ss
Aquæ, f. ℥ijss. M.
One-half to be taken every day at dinner.

For the administration of elaterium, when indicated, our author employs the following formulæ:—

767. R. Elaterii, gr. iss
Pulveris capsici, gr. lx
Hydrargyri chloridi mitis, gr. xij
Extracti hyoscyami, gr. xvij. M.
For twelve pills. Two to be taken at a dose.

The capsicum prevents the nausea which the elaterium often produces. If a very active purgative is required, the dose may be doubled.

768. R. Elaterii, gr. j
Spiritus ætheris nitrosi, f. ℥ss
Liquoris ammoniæ acetatis, f. ℥j
Syrupi zingiberis, f. ℥ij. M.
One small teaspoonful in a wineglassful of water, every two hours, until the bowels are freely acted on.

RÉSUMÉ OF REMEDIES.

Elaterium is a useful purgative when there is much dropsy, but it is best to combine it with *hyoscyamus*, as it sometimes causes exhausting diarrhoea, especially if given after symptoms of uræmic poisoning have set in.

Guaiacum, in tincture or decoction, is regarded by Dr. COPLAND as the best diuretic in Bright's disease, especially when the skin is cool as well as dry.

Ipecacuanha, in the form of Dover's powder, (gr.v-viij, thrice daily), is not only a useful diaphoretic in Bright's disease, but also allays pain and irritability, especially if assisted by a warm bath every other evening, or oftener.

Potassii Bitartras is recommended as a diuretic by Prof. NIEMEYER.

Potassii Iodidum is said by Dr. RINGER to prove sometimes of signal service, even when the dropsy has been extensive and the urine very scanty.

Scoparius, in decoction, combined with nitric ether, is recommended by Dr. BARLOW, when the renal secretion is very deficient. A pint of the infusion may be given.

Diuretics. Drs. BRIGHT, OSBORNE, WATSON, and others, condemn the use of diuretics, particularly those which are stimulating, in inflammatory dropsy attendant on granular disease of the kidneys. Dr. CHRISTISON believes, however, that they can be used without risk, and advises the following formula:—

769. R.	Pulveris digitalis,	gr.i-ij	
	Potassii bitartras,	ʒj-ij.	M.
	Ter in die, ex aq.		

Diuretics may be sometimes employed, with good results, by the *endemic* method.

CYSTITIS.

PROFESSOR S. D. GROSS, M. D., D. C. L., OF PHILADELPHIA.

In the early stages of the complaint the remedies are local and general bleeding, cathartics and diaphoretics, with low diet. When there is no marked biliary derangement, castor oil is the best purgative. When such is present, calomel, either alone or with jalap. After depletion and catharsis, the following "antimonial and saline mixture" seldom fails to relieve the symptoms:—

770. R.	Antimonii et potassii tartratis,	gr.ijss	
	Magnesiæ sulphatis,	ʒij	
	Morphiæ sulphatis,	gr.ij	
	Tincturæ veratri viridis,	f.ʒiss	
	Acidi sulphurici aromatici,	f.ʒss	
	Zingiberis syrupi,	f.ʒij	
	Aquæ,	f.ʒx.	M.

A tablespoonful every two, three or four hours.

The action of these drugs may be favored by tepid drinks, warm baths and fermentations. Diuretics should be avoided. If the urine is scanty, a small quantity of nitrate of potassa or spirit of nitrous ether may be given in a demulcent fluid. Fifteen to twenty leeches may be applied to the perineum and verge of the anus. Dry or wet cups to the sacro-lumbar region will relieve the pain in the back. Anodynes by the rectum are very valuable, as:—

771. R.	Pulveris opii,	gr.ijj	
	Butyri cacaonis,	q. s.	M.
Mix thoroughly for a suppository.			

Or a drachm of laudanum in f.℥ij of tepid water may be thrown up with a syringe having a long nozzle after the lower bowel has been washed out.

Chronic cystitis, or catarrh of the bladder, demands an unirritant, farinaceous diet, without condiments, acids, or spirits, in any form. Exposure to cold must be carefully avoided. The acrid remaining urine should be drawn off, and pain and sleeplessness may be allayed by the following suppository:—

772. R.	Pulveris opii,	gr.ij	
	Pulveris camphoræ,	gr.v	
	Extracti belladonnæ,	gr.ss	
	Butyri cacaonis,	q. s.	M.
Make one suppository.			

A particularly serviceable recipe where there is a morbid irritability of the neck of the bladder is the following:—

773. R.	Uvæ ursi folia,	℥iiss	
	Humuli folia,	℥ss.	
Infuse in a quart of water, in a covered vessel, for two hours, and add:			
	Sodæ bicarbonatis,	℥ij	
	Morphiæ sulphatis,	gr.ij.	M.
Of this a wineglassful is to be taken five or six times a day.			

In ordinary cases no remedy equals the balsam of copaiba, as follows:—

774. R.	Copaibæ,	f.℥j	
	Morphiæ sulphatis,	gr.ij	
	Pulveris acaciæ,	℥ij	
	Sacchari alba,	℥ij	
	Olei gualtheriæ,	gtt.x	
	Aquæ,	f.℥vj.	M.
A teaspoonful to a dessertspoonful three or four times a day.			

DR. G. W. SIMPLE, OF VIRGINIA.

In the *Virginia Medical Monthly*, June, 1876, this writer records striking success in cystitis with:—

775. R. Atropiæ sulphatis, gr. j
Acidi carbolici, gtt. xij
Aquæ destillatæ, f. ʒviij. M.

Forty to sixty drops of this in half an ounce of water as a rectal injection, twice a day.

It uniformly and immediately arrests the frequent strangury and painful micturition, gradually checks the mucous and sanguineous discharges, and relieves the supra-pubic pain with the cystic inflammation. When the urine is alkaline, Mettauer's nitro-muriatic acid mixture is given to correct it; and when it is so acid as to irritate, the acidity is corrected by antacid remedies, of which the bicarbonate of potash, with subnitrate of bismuth, is generally preferred, because of the tonic effect of the bismuth, and its very soothing effect on the mucous surfaces of the urinary organs.

PROFESSOR ROBERT DRUITT, M. D., SCOTLAND.

776. R. Decocti chimaphillæ, f. ʒj
Syrupi singiberis,
Spiritus ætheris nitrici, aa f. ʒj. M.

For a dose. Twice a day in chronic cystitis.

PROF. RICORD, PARIS.

777. R. Argenti nitratis, gr. viij
Aquæ destillatæ, f. ʒiijss. M.

By the aid of a sound introduced into the bladder, water is injected into this organ; this is allowed to pass out immediately, and replaced by the half of the above solution, which, in its turn, is evacuated after about a minute's sojourn. This injection is to be repeated on the third or fourth day, if necessary, in chronic cystitis.

778. R. Extracti belladonnæ, gr. v
Extracti valerianæ, ʒj. M.

Divide into thirty pills. One thrice daily, in chronic cystitis, when the patient supports opium badly; also belladonna suppositories.

779. R. Opii pulveris, ʒij
Camphoræ pulveris, gr. xv
Saponis, ʒvss. M.

Divide into sixty pills. One thrice daily, in acute cystitis.

LOCAL INTERNAL TREATMENT.

Injectations into the bladder are sometimes used in chronic cystitis. When all acute symptoms have subsided, tepid water, or, still better, tepid urine, may be employed, retained for thirty or forty seconds and repeated once or twice a day; or the following medicated injections may be resorted to:—

Argenti nitras, gr.i to f.ʒiv of warm water, to commence with, and going up to gr.ss or gr.j, at the outside, to the ounce. Carbolic acid, ℥j-ij to f.ʒiv of warm water, when the urine is offensive. Nitricum acidum dilutum, ℥j-ij to f.ʒj of warm water. Plumbi acetat, gr.j to f.ʒiv of warm water once a day, when the urine is alkaline and depositing phosphates. Potassæ chloras, gr.iv-v to f.ʒj of warm water, when the urine is putrid. Sodæ biboras is recommended by Sir HENRY THOMPSON in the following formula:—

780.	R.	Sodæ biboratis,	ʒj	
		Glycerinæ,	f.ʒij.	M.
Add two or three teaspoonfuls to f.ʒiv of warm water.				

In administering injections into the bladder the following rule given by Sir HENRY THOMPSON should be carefully observed:—A flexible catheter being first introduced into the bladder, “have ready a five-ounce india-rubber bottle with a brass nozzle and stop-cock, the nozzle long and tapering, so as to fit a catheter of any size between Nos. 5 and 10, filled with warm water, say at 100° F.; attach the nozzle gently to the catheter and then throw in slowly a fourth of the contents; let that run out; it will be thick and dirty, no doubt; then inject another fourth, which will be less so; again another, which will return clearer than the preceding; and the fourth portion will probably come away nearly clear. Now these four separate washings of an ounce each will have been really more efficient than two washings of four ounces each, and you will have reduced the amount of instrumental irritation to a minimum. . . . Never, under any circumstances, throw in more than two ounces at a time, and even this quantity, for efficient washing, is better avoided.” Dr. BRAXTON HICKS advises that the point of the catheter, in giving an injection, should not pass far beyond the neck of the bladder, otherwise, if it touches the sides or back, it occasions great distress.

DR. MALLEZ, PARIS.

781. R. Sodii hyposulphitis, ℥iv
Aque destillatæ, Oj. M.

This solution to be employed in five injections into the bladder, in chronic vesical catarrh.

782. R. Potassii permanganatis, ℥ij
Aque destillatæ, f. ʒx. M.

Inject one-third of this solution into the bladder, in chronic catarrh, when the urine is purulent.

783. R. Tincturæ iodinii, ℥ij
Potassii iodidi, gr. xv
Aque destillatæ, f. ʒx. M.

Inject one-third into the bladder, on three consecutive days, in chronic cystitis, with light mucous catarrh. If this injection causes pain, use the following:—

784. R. Tincturæ iodinii, ℥xv
Potassii iodidi, ℥ss
Extracti belladonnæ, gr. xv
Aque destillatæ, f. ʒx. M.

One-third to be injected as above.

785. R. Potassii iodidi, ℥iv
Extracti hyoscyami, ℥ss
Extracti conii, gr. v
Butyri cocose, ℥iv. M.

For one suppository. To be introduced into the rectum in engorgements and hypertrophy of the prostate.

RÉSUMÉ OF REMEDIES.

- Ammonia Benzoas* is recommended by Dr. GARROD, where a tendency to phosphatic deposit exists.
- Benzoicum Acidum* is advised by Sir HENRY THOMPSON in chronic cystitis. It should be administered in the form of a pill (gr. iij-iv, with glycerine), and not less than gr. xxiv taken daily.
- Sida*, in the form of infusion, given to the extent of half a pint daily, has proved of service in the hands of Sir HENRY THOMPSON.
- Colchicum* is of value in the cystitis of rheumatic and gouty subjects. It may be either given alone or in connection with pareira brava or buchu. It is indicated, according to Sir BENJAMIN BRODIE, when the urine is alkaline.
- Copaiba*, alone or combined with cubeba, is useful in relieving intense irritation, particularly in persons of a strumous diathesis or debilitated constitution. Sir HENRY THOMPSON states that the dose in these cases should not exceed ℥.v, in mucilage, three or four times a day.
- Cubeba*, given cautiously, in small doses (gr. x-xv, thrice daily), is recommended by Sir BENJAMIN BRODIE as often useful in relieving the symptoms, both in primary inflammation and in that resulting from the presence of a calculus in the bladder.
- Ferri Chloridi Tinctura* has been employed, when persevered in, with advantage, by Sir BENJAMIN BRODIE, in doses of ℥.viij-xv twice a day, in water or an infusion of buchu.

derangement is not induced by them, and fish is a most important article with which to vary the monotony of the dietary. Milk also may be indulged in occasionally, as it is not found that the sugar it contains is readily converted into glucose. Its influence, however, requires watching. It should be combined with half its bulk of lime-water, or be used in the form of buttermilk. If it be found desirable or necessary to employ alcoholic drinks, a selection should be made from those wines and spirits which are freest from sugar. Of these, clarets may be chemically considered the best, then Burgundy. The so-called "fruit wines" must be interdicted, and of all alcoholic beverages, *weak* brandy-and-water is the safest. The amount of brandy should always be *measured*. A teaspoonful in a tumblerful of water is generally sufficient for an ordinary dinner drink. No diabetic need expect to recover or continue well who cannot exercise self-control, and make up his mind to be temperate *in all things*. Tea and coffee without sugar may be permitted. If cocoa agrees, it may be taken, prepared *from the nibs only*. When soups are allowed, they ought to be really good, and flavored with aromatics and onions, to the exclusion of carrots, turnips and peas. They may be thickened with some bran, *finely powdered*. Pickles in small quantities may be permitted to convalescents. Lettuces agree well when eaten sparingly with oil and vinegar, or with a little salt only, if the vinegar is likely to disagree.

The great value of *bran cakes*, as a substitute for bread in cases of diabetes, has now been established by the experience of so many individuals that its use ought to be insisted upon. The bran should be *thoroughly washed*, so that it may be as free from starch as possible, and *finely powdered*, so that it may not irritate the susceptible mucous membrane of the intestines.

GEORGE W. BALFOUR, M. D., M. R. C. P., ETC.

Our author highly recommends the *milk treatment* in diabetes. This treatment does not exclude the employment of opium, of iron, or quinine, or any other remedies otherwise considered appropriate to such cases; indeed, they may be very properly conjoined: in some patients they need not be given, because not required. From two to three months is the period usually stated as sufficient to cause the complete disappearance of sugar from the urine; and then the diet may, if desired, be rendered more solid by the detracting

This drug was prescribed on purely empirical grounds. During its administration the patient continued to gain weight and strength, and did not exhibit any of the usual symptoms of intoxication by iodine.

Patients may drink as much as they feel disposed ; for the gratification of the thirst provides the normal outlet for the abnormal constituent of the blood.

J. M. DA COSTA, M. D., PHILADELPHIA.

790. R. Pulveris opii, gr. ss.
For one pill, thrice daily.

The *opium treatment*, Dr. DA COSTA has found to be productive of the most good in his hands. He cannot explain the rationale, but he does know that it has the most influence in lessening the thirst, the excretion of sugar and the general waste of flesh. The only objection to its use is the risk which is run of accustoming the patient to taking this powerful drug.

791. R. Ammoniae carbonatis, ʒij-iv
Aquaë cinnamomi, f. ʒvj. M.
A tablespoonful three or four times a day. This, in addition to a moderately restricted diet, forms a very good treatment.

792. R. Tincturaë ferri chloridi, gtt. xx-lx.
For one dose, in water, thrice daily.

This will often do good when nothing else proves of service. The *pepsin* and *rennet treatments* amount to nothing. Dr. DA COSTA has tried them faithfully, and merely lost time.

Diet.—Although substances containing a great deal of sugar, and still more those containing a great deal of starch—which is readily converted into sugar—are poisonous to diabetic patients, yet it is not advisable to put them on a strictly animal diet. Such a regimen is irksome in the extreme, and will not be followed out. After all, it is not the saccharine substances which go into the body that cause diabetes ; they merely add to it. It is simply impossible to avoid giving food capable of being converted into sugar.

Bran bread is perfectly unobjectionable ; but a small quantity of ordinary bread should be permitted. Cakes made from *almond-flour* are favorites with English physicians. Fruits should be interdicted, and potatoes sparingly used.

Bran baths (two or three handfuls of bran in the bath) are very

serviceable in relieving the dryness of the skin, which is so troublesome.

793. R. Infusi cascarillæ, Oj.
A wineglassful three or four times a day.

The use of this light bitter lessens the thirst. Of course, water must be allowed beside; but the infusion will take the place of a good deal of water.

THOMAS HAWKES TANNER, M. D., F. L. S., LONDON, ETC.

794. R. Ferri ammoniæ citratis, ʒi
Spiritus ammoniæ aromatici, f. ʒvj
Potassæ bicarbonatis, ʒij
Infusi calumbæ, q. s. ad. f. ʒiij. M.
A tablespoonful to be taken twice a day, with one tablespoonful of lemon juice, in a little water.

This recipe often proves very valuable. It should be taken for two or three weeks at a time, then discontinued, and recommenced according to the general strength.

795. R. Pulveris opii, aa gr. j. M.
Quiniæ sulphatis, aa gr. j. M.
For one pill, thrice daily. Useful in some cases.

796. R. Creasoti, mxx
Pulveris aromatici, ʒiv
Mucilaginis acaciæ, q. s. M.
Divide into twenty pills. One to be taken three times a day.

It is believed that this remedy tends to check the conversion of the food into sugar.

DR. J. HOAG, INDIANA.

This writer claims, in the *Journal of Materia Medica*, September, 1874, to have achieved uniform success with the following treatment:—The patient is forbidden all fruits and vegetables save bread of unbolted wheat flour, and this in the most limited quantities. Tea, coffee, liquors, and all drinks except pure water and milk diluted with lime-water, at meals, are also forbidden. The diet should be fresh meats, cream, cheese, butter, soft eggs, fish, oysters and small quantities of bran bread. The entire body is sponged daily with an alkaline bath, and the following ordered:—

797. R. Antimonii sulphurati, ℞j
 Pulveris ipecacuanhæ et opii, ℞ij
 Ammonia carbonatis, ℞j
 Pulveris opii, gr.x. M.

Make twenty powders. One to be taken morning and night.

Also,

798. R. Tincturæ cinchonæ, f.℞ij
 Tincturæ ferri chloridi, f.℞iv
 Tincturæ digitalis, f.℞j
 Spiritus lavandulæ compositi, f.℞j. M.

A teaspoonful daily, at noon.

DR. ORSON MILLARD, MICHIGAN.

799. R. Tincturæ ferri chloridi, f.℞ij
 Olei morrhuæ, f.℞iv
 Acidi carbolic, f.℞iss. M.

A teaspoonful before each meal. Said by this writer (*Michigan University Medical Journal*, January, 1872) to bring about the disappearance of the sugar promptly in uncomplicated cases.

RÉSUMÉ OF REMEDIES.

Ammonia Carbonas is regarded by Dr. BARLOW (*Guy's Hospital Reports*, vol. x), in doses of gr.v-vij, with a few drops of tincture of opium, in a light bitter infusion, every six hours, as a most efficient remedy. Animal food, together with cruciferous vegetables, as greens, broccoli, turnip tops, etc., should, at the same time, be freely taken.

Ammonia Citras, conjoined with the use of Dover's powder or ipecacuanha, is considered by Dr. W. PROUT as one of the best of diaphoretics in diabetes.

Ammonia Phosphas is recommended by Dr. BASHAM (*British Medical Journal*, April 10th, 1869), combined as follows:—

800. R. Ammonia phosphatis,
 Ammonia carbonatis, āā gr.x
 Spiritus ammonia aromatici, ℥xxx
 Aquæ, f.℞j. M.

Add this to the juice of a fresh lemon, and order to be taken thrice daily. Its use must be persevered in.

Codeia is preferred by Dr. F. W. PAVY (*Guy's Hospital Reports*, 1870) to opium and morphia, as being equally effectual in controlling the disease without exerting the same narcotic effect. The proper commencing dose is gr.ss thrice daily, which may be gradually increased to gr.ij-ijj.

Creasote has been recommended by Sir T. WATSON and Dr. T. H. TANNER.

Ferrum, in various forms, as a tonic.

**Ipecacuanha Pulvis Compositus* is a useful remedy, highly recommended by Dr. W. PROUT, in combination with full doses of reduced iron.

**Opium* has been found by Prof. DA COSTA a most efficient remedy in his

HÆMATURIA.

DR. CHARLES HORION, PARIS.

823. R. Ergotæ pulveris, gr.xv
 Acidi tannici, gr.ijj
 Digitalini, gr.ʒ. M.

Divide into ten pills. Give five a day, in hæmaturia. Prolonged cold injections into the bladder, cold compresses to the perineum and pubis.

DR. W. LANGE, ERLANGEN.

824. R. Extracti ergotæ fluidi, ℥xxv
 Acidi tannici, gr.xxx
 Aquæ destillatæ, f.ʒvj
 Syrupi, f.ʒj. M.

The whole to be given in tablespoonful-doses, in the course of the twenty-four hours, in hæmaturia. Cold compresses to the hypogastrium, ice by the mouth, cold enemata.

PROF. S. D. GROSS, M. D., D. C. L., PHILADELPHIA.

825. R. Olei terebinthinæ,
 Acidi sulphurici diluti, aa f.ʒj
 Acidi gallici, gr.xxx
 Mucilaginis acaciæ, f.ʒss
 Aquæ, f.ʒj. M.

A dessertspoonful every three hours.

In all cases ice to the hypogastrium and in the rectum or vagina is serviceable; rest in the recumbent posture, the pelvis elevated, and the room cool, are important accessories.

RÉSUMÉ OF REMEDIES.

Alumen injected into the bladder, in a solution of the strength of gr xx to aquæ Oj, sometimes arrests the discharge in hæmaturia after the failure of ordinary remedies. As an internal remedy in hæmaturia, alum is less effectual than gallic acid.

Argenti Nitras, in very weak solution, injected into the bladder in hæmaturia arising in connection with vesical tumor, is recommended by Sir H. THOMPSON.

Ferri Chloridi Tinctura, in doses of ℥x-xx, several times a day, is a valuable remedy in hemorrhage from the bladder.

* *Gallicum Acidum*, alone or combined with sulphuric acid, opium or digitalis, is an excellent astringent in hæmaturia. Dr. W. BINTON recommends the following formula:—

826. R. Acidi gallici, gr.x
 Acidi sulphurici diluti, ℥x
 Aquæ, f.ʒj. M.

For one dose.

Diuresis will also sometimes be induced by fomenting the abdomen with an infusion of digitalis of about four times the usual strength.

803. R. Potassæ acetatis, gr. xx
 Spiritus ætheris nitrosi, f. ʒss
 Decocti scoparii, f. ʒiss. M.

To be given with each dose of the above pills.

At the same time, an ointment composed of equal parts of blue ointment and ointment of belladonna is to be applied over the abdomen. This treatment is a successful one in cases of ascites due to cirrhosis.

ROBERT J. GRAVES, M. D., DUBLIN.

804. R. Potassii nitratis, aa ʒj
 Potassii carbonatis, aa ʒj
 Tincturæ scillæ, aa gr. xxx
 Tincturæ digitalis, aa f. ʒij
 Mellis despumati, f. ʒij. M.

For an electuary. To be taken in teaspoonful doses, in the course of three or four days, in order to increase the activity of the kidneys, in various forms of dropsy.

805. R. Oxymellis scillæ, f. ʒiss
 Potassii bitartratis, ʒij. M.

Dose—A teaspoonful, as a diuretic, in various forms of dropsy.

DR. GUIBERT, PARIS.

806. R. Tincturæ scillæ,
 Tincturæ digitalis, aa f. ʒij
 Tincturæ colchici, aa f. ʒvj
 Linimenti camphoræ, f. ʒij
 Aquæ ammoniæ, f. ʒiss. M.

To be rubbed well into the abdomen and thighs in dropsy.

DR. PORCHER, PARIS.

807. R. Sodii sulphatis,
 Potassii bitartratis, aa ʒj
 Spiritus ætheris nitrosi, f. ʒijss
 Syrupi, f. ʒj
 Aquæ, f. ʒvss. M.

A tablespoonful twice daily, in dropsy accompanied with an active, full circulation. It procures an abundant alvine evacuation, and often, at the same time, a copious secretion of urine.

808. R. Tincturæ cantharidis, f. ʒiss
 Spiritus ætheris nitrosi, f. ʒvj
 Syrupi aurantii corticis, f. ʒj
 Aquæ fœniculi, f. ʒviij. M.

A tablespoonful two or three times a day, in different forms of dropsy.

NEPHRITIS.

ALFRED L. LOOMIS, M. D., OF NEW YORK.

Incipient nephritis, or active renal congestion, can, in most cases, be speedily relieved by the following treatment:—First, place the patient in bed, in a room with a temperature above 75° Fah., then apply a dozen dry or wet cups over the lumbar region. Let the patient drink freely of diluent drinks, and administer one or two drastic purgatives. Induce moderate diaphoresis, and avoid carefully all stimulants.

In passive renal congestion, which is generally associated with some cardiac disease, digitalis is the most serviceable remedial agent.

RÉSUMÉ OF REMEDIES.

Belladonna is recommended by Dr. J. HARLEY in acute nephritis.

Colchicum, conjoined with magnesia, is useful in the nephritis of gouty subjects.

Opium is a remedy of great value, when assisted by diluents, the hip-bath, and large flaxseed poultices over the lumbar region.

**Baths*. The hot bath, or the hot hip-bath, is a useful soothing remedy.

Enemata of three or four quarts of water, at blood heat, will, it is said, sometimes cut short an attack of nephritis. The first injection usually brings away with it much fecal matter; the second, to be given immediately after the return of the first, is usually retained without difficulty.

**Poultices*. Large light flaxseed poultices not only afford present relief, but arrest the progress of the disease.

SABULOUS DEPOSITS (GRAVEL).

SIR HENRY THOMPSON, F. R. C. S., ETC., LONDON.

This distinguished surgeon delivered some lectures in 1873 on the preventive treatment of calculous disease, and as nineteen out of twenty stones are urates, his especial question was, "How to prevent uric-acid calculus?" He condemns reliance on diuretics and strongly alkaline waters, such as Vichy. At the bottom of the tendency to uric acid production there often lies inactivity of the liver. For this, nothing is so valuable as the *saline* mineral waters, as Püllna, Friederichshalle, Marienbad, Carlsbad or Fran-

zensbad (in the order of their strength). These waters should be given, from three to ten ounces, with half the quantity of hot water, before breakfast. In regard to *diet*, the patient should eschew alcohol, saccharine and fatty articles. Butter, cream and pastry are included in the last mentioned. Fresh, green vegetables may be taken freely, but not sweet fruits, as grapes, pears and plums.

All medicinal agents, secret or professional, are solutions of lime, soda or potash, alone or combined. Of all these, the citrate and the bicarbonate of potash are preferred by our author. The former may be taken in doses of gr.xl to gr.l, every three or four hours, in aquæ f.ʒiv. The following conditions are essential to success; certainty that the stone is uric acid and of small size; that the urine is acid, and never ammoniacal.

829. R. Potassæ bicarbonatis, ʒxiij
Acidi citrici, gr.vij-xxiv
Aquæ, ad. f.ʒxiij. M.

One or two tablespoonfuls in a glass of water, thrice daily. Each ounce contains ʒj of citrate of potassa.

DR. VENABLES, LONDON.

830. R. Sodii boratis, gr.vij
Sodii bicarbonatis, gr.ix
Syrupi aurantii corticis, f.ʒiss. M.

To be taken during the day, in soda-water, for the red deposit seen in the urine of persons predisposed to gravel. The borax and the bicarbonate of sodium may be replaced by from four to six grains of carbonate of lithium.

S. W. BUTLER, M. D., PHILADELPHIA.

831. R. Fresh root of hydrangea arborescens, 2 pounds
Water, 6 quarts.

Boil down to two quarts; strain, and add one quart of honey, and boil down to one quart. A teaspoonful twice or three times a day.

Dr. BUTLER highly recommends this remedy in cases of sabulous and gravelly deposits in the bladder. Under its use large quantities of sand and gravel have been removed.

A fluid extract of the hydrangea arborescens is prepared by the leading pharmacutists, and may be readily obtained.

C. W. FRISBIE, M. D., NEW YORK.

832. R. Sodæ biboratis, ʒij
Extracti uvæ ursi fluidi, f.ʒj
Spiritus ætheris nitrosi,
Tincturæ opii deodoratæ, āā f.ʒss
Aquæ, f.ʒiij. M.

A teaspoonful from three to six times daily, in uric acid diathesis or brickdust deposit.

The celebrated *Harlem oil*, used in Holland as a remedy against stone, is:—

833. R.	Olei cadini,	f.ʒiv	
	Olei terebinthinæ,	f.ʒiij	
	Sulphuris loti,	ʒj.	M.

Make one hundred and twenty capsules. One three times a day.

RÉSUMÉ OF REMEDIES.

- **Chloroform* given by the mouth or by inhalation relieves pain without interfering with that muscular contraction which probably assists in the onward propulsion of the stone. The same remark applies to *ether*.
- **Opium*, in full doses, given by the mouth, or in the form of enema or suppository, is a remedy of great value. But *morphia*, hypodermically, is usually more effectual than any of these modes of administering opium.
- Triticum Repens*, in decoction (ʒij to aquæ Oj, boiled for fifteen minutes and strained), is said to have afforded great relief in renal calculus.
- **Baths*. The hot bath or hip bath is a useful, soothing remedy.
- Ice*. Dr. W. PROUT states that in protracted suffering in the passage of renal calculi he has occasionally obtained relief from the application of pounded ice to the region of the kidney. It is chiefly applicable when the calculus is of oxalate of lime, or the phosphate, but is not to be employed in plethoric, gouty patients suffering from lithic acid calculi.

VI. DISEASES OF THE BLOOD.

Anæmia—Cerebro-spinal Meningitis—Erysipelas—Gout—Malarial Diseases—Milk Sickness—Purpura Hemorrhagica—Rheumatism—Scrofula—Typhoid Fever—Variola.

ANÆMIA.

PROF. JOHN B. BIDDLE, M. D., PHILADELPHIA.

834. R. Quinæ sulphatis, gr.ij
 Ferri sulphatis, gr.j
 Strychniæ, gr.ʒv. M.
 For one pill, thrice daily.

An excellent tonic combination, frequently prescribed by our author.

THOMAS K. CHAMBERS, M. D., LONDON.

TONIC BATH.

835. R. Acidi muriatici, f.ʒj-ij
 Aquæ calidæ, C. xxx.

In a wooden bath, the patient to remain in it for from ten to twenty minutes.

Dr. CHAMBERS has found this bath to confer muscular strength, even when employed alone. When used in cases of anæmia, while iron is being given internally, it gives an impetus to the improvement of the patient; more iron is taken up, and the blackening of the fæces ceases.

J. M. DA COSTA, M. D., PHILADELPHIA.

TONIC INHALATION.

836. R. Ferri lactatis, gr.j-ij
 Aquæ destillatæ, f.ʒj.

For one inhalation. To be administered (by means of any form of steam atomizer throwing a fine spray) two or three times a day. Useful in anæmia, when iron given by the stomach is not assimilated. Also in cases of gastric ulcer, when the constitutional effect of this agent is called for, while it is desirable to spare the stomach.

837. R. Ferri pyrophosphatis, 3j
 Aquæ bullientis, f. 3ss.
 Mix and add,
 Extracti gentianæ fluidi, f. 3ss
 Curaçoe, f. 3iss
 Vini, q. s. ad. fiat f. 3iv. M.
 Teaspoonful thrice daily.

This preparation, known as *elixir gentianæ ferratæ*, is much used and highly esteemed in this city.

PROF. EASTON, UNIVERSITY OF GLASGOW.

The following formula of our author has become very popular in England since its first publication in AITKEN'S "Practice of Medicine," as a general tonic in anæmia and cachexia. It is known as the *Syrupus Ferri, Quiniæ et Strychniæ Phosphatum*:—

838. R. Ferri sulphatis, 3v
 Sodæ sulphatis, 3vj-3j
 Quiniæ sulphatis, gr. cccij
 Acidi sulphurici diluti, q. s.
 Aquæ ammoniæ, q. s.
 Strychniæ, gr. vj
 Sacchari albi, 3xiv
 Acidi phosphorici diluti, f. 3xiv.

Dissolve the sulphate of iron in one ounce of boiling water, and the phosphate of soda in two ounces of boiling water. Mix the solution and wash the precipitated phosphate of iron till the washings are tasteless. With sufficient dilute sulphuric acid dissolve the sulphate of quinia in two ounces of water. Precipitate the quinia with ammonia water and carefully wash it. Dissolve the phosphate of iron and quinia thus obtained, as also the strychnia, in the diluted phosphoric acid; then add the sugar and dissolve the whole, and mix without heat.

The above syrup contains about one grain phosphate of iron, one grain phosphate of quinia, and one thirty-second of a grain of phosphate of strychnia in each drachm. *The dose* might, therefore, be a teaspoonful three times a day.

The amount of phosphate of quinia might be increased according to circumstances; and if eight grains of strychnia were employed in place of six, as in the above, the phosphate of strychnia would be in the proportion of one twenty-fourth of a grain in every fluid drachm of the syrup. A much larger dose should scarcely be ventured upon.

PROFESSOR S. D. GROSS, M. D., PHILADELPHIA.

839. R. Tincturæ ferri chloridi, f. 3j
 Quiniæ sulphatis, gr. xx. M.
 Twenty drops thrice daily, in sweetened water, through a tube.

He prefers the tincture of the chloride to all the other preparations of iron.

Prof. CHAS. D. MEIGS considered *reduced iron* (ferrum redactum) to be the most efficient of the chalybeates, in two-grain doses three times a day, after each meal, on a full stomach.

DR. JOHN FORSYTH MEIGS, M. D., PHILADELPHIA.

840. R.	Ferri et quiniæ citratis,	Div	
	Extracti gentianæ fluidi,		
	Spiritûs lavandulæ compositi,	aa	f.ʒiij
	Alcoholis,		f.ʒvj
	Aquæ,		f.ʒivss. M.

A tablespoonful thrice daily.

PROFESSOR ELLERSLIE WALLACE, M. D., PHILADELPHIA.

841. R.	Ferri pyrophosphatis,	ʒij	
	Curæosæ,	f.ʒss	
	Aquæ,	f.ʒijss. M.	

A teaspoonful four times a day.

RÉSUMÉ OF REMEDIES.

Ferrum. Chalybeates, given until the blood contains its normal amount of iron, are productive of the best effect in anæmia. If given too long, however, they produce plethora, indigestion and general derangement.

Ferri Mistura Aromatica. The following formula is an excellent one:—

842. R.	Pale cinchona bark, powdered,	ʒi
	Calumba root. in coarse powder,	ʒss
	Cloves, bruised,	ʒi
	Fine iron wire,	ʒss.

Macerate in peppermint water, f.ʒxij, for three days, agitating occasionally. Filter, add peppermint water, q. s. ad. f.ʒxijss; then add compound tincture of cardamoms, f.ʒiij; and tincture of orange peel, f.ʒss, and preserve in a well-stoppered bottle. Dose—f.ʒi-ij.

Ferri Peroxidum Hydratum. Dr. S. ASHWELL recommends the following formula, as one which will often agree when other ferruginous compounds cause irritation:—

843. R.	Ferri peroxidi hydrati,	gr.viij	
	Pulveris ipecacuanhæ radicis,	gr.j	
	Hydrargyri cum cretâ,	gr.ij. M.	

Make powder. Take one twice a day.

Ferri Sulphas is a very effective salt of iron in anæmia. It may be combined with gentian; with quinine and strychnia; with a sedative, as opium; with an aperient, as rhubarb or aloes; with hops, as advised by Dr. S. ASHWELL.

This treatment should be preceded by purgation or venesection, if indicated, and be followed in the morning by a gentle laxative. These doses are recommended by our author as the most efficient, and as seldom disappointing the most sanguine expectations. Where there is a full, bounding pulse, indicating excessive arterial action, then the following will come into play :—

867. R. Tincturæ aconiti radicis, f.ʒj
 Morphine sulphatis, gr.ij
 Antimonii et potassæ tartratis, gr.ij
 Aquæ, f.ʒiiss
 Syrupi zingiberis, f.ʒss. M.
- A teaspoonful every three hours.

Veratrum viride may be substituted for the aconite in the same or double the dose. The action of these potent remedies should, of course, be carefully watched and kept within proper limits. Together with the above means the following should be employed, to neutralize the acid state of the blood :—

868. R. Potassæ bicarbonatis, ʒij.
 Sodæ bicarbonatis, ʒij. M.
- For six powders. One to be taken every six hours, in a wineglassful of water.

As a local application nothing will be found better than,

869. R. Tincturæ opii, f.ʒj
 Linimenti saponis, f.ʒij. M.
- To be rubbed in twice a day, and constantly kept in contact with the affected joint by means of a piece of flannel covered with oiled silk. A fly-blister may be used if the disease manifests a disposition to linger.

PROF. A. B. GARROD, KING'S COLLEGE, LONDON.

870. R. Lithii carbonatis, gr.iv
 Aquæ rosæ, f.ʒvj. M.

This solution is to be warmed and then imbibed by means of charpie or a piece of sponge, and applied on the seat of pain, and covered by a sheet of gutta-percha. Two or three times a day the application is to be wet with the solution, in order to keep it always moist. Internally, the carbonate of lithia, in doses of gr.ijj-vj, or the citrate, in doses of gr.v-x, in aerated water.

871. R. Fraxini foliæ, ʒss.
 Aquæ, Oj.

The leaves are to be boiled in the water during ten or fifteen minutes,

then strain and sweetened. To be taken in fractional doses during the day, an hour before the meals, in chronic gout.

The leaves of common ash, though much extolled in France and Germany in the treatment of gout and rheumatism, have not succeeded in the hands of our author, in acute gout; when taken for a long time and in large quantities, in the form of decoction of the leaves, they have probably some influence in keeping off the attacks in chronic gout.

DR. GALTIER-BOISSIERE, FRANCE.

The author gives eight drops of the tincture of colchicum about every two hours, in a small cup of tea or weak coffee, until thirty-two drops are administered during the first day, in acute gout. The next day the colchicum is stopped, and the patient put on the use of sulphate of quinine, fifteen grains being given, in four doses in the course, with a few drops of dilute sulphuric acid in a cup of weak coffee. The third day, forty drops of tincture of colchicum are given; the fourth day, fifteen grains of quinine; and the fifth day, fifty drops of the tincture; that is to say, each time one-fourth more. This increase of dose is to be stopped so soon as abundant diaphoresis and diuresis show themselves, which usually are followed by a marked diminution of the pain. But the quantity of one fluid drachm and a half of the tincture is never to be exceeded during the day, taken in four doses, at four hours' interval.

RÉSUMÉ OF REMEDIES.

Aconite. Professor Gross recommends tincture of aconite-root, with morphia and antimony, when there is excessive arterial action.

Ammonii Phosphas has been recommended, in ʒj doses daily, highly diluted. Dr. GARROD has derived much benefit from the long-continued use of this salt in chronic conditions of the gouty habit.

Cajuputi Oleum, in doses of gtt.v-vj, frequently repeated, is serviceable in retrocedent gout.

Colchicum, in gout, has been compared to cinchona in ague, but unfortunately, unlike the latter remedy, it does not prevent a return of the disease. Dr. A. B. GARROD states that often an almost magical change is produced by a single large dose, without the least increase in any of the secretions, the effect showing itself in the rapid decrease of the pain, and other symptoms of the joint inflammation.

Frazini Folia. Ash leaves, in infusion, have been used by Dr. A. B. GARROD with advantage, but, as he remarks, the amount of the infusion given daily being considerable, the action of the diluent must not be forgotten.

Guaiacum is considered by Dr. A. B. GARROD as especially useful in the

ERYSIPELAS.

DR. WILHELM ZUELZER, CHARITÉ HOSPITAL, BERLIN.

This observer believes no specific treatment for erysipelas has been established. For the rational treatment for the more serious forms the mineral acids may be used, and quinine in full doses:—

848. R.	Quinise sulphatis,	ʒi	
	Acidi sulphurici diluti,	f.ʒij	
	Aquæ,	f.ʒiij.	M.

A dessertspoonful three times a day.

Cold baths, several times a day, are a valuable means to reduce the temperature, especially in protracted cases. Violent cerebral symptoms must be met by cold applications to the head, and by active purgatives. When œdema of the glottis is threatened, the inhalation of solutions of tannin and alum is called for, and the energetic use of cold, by the administration of small pieces of ice and by ice-bags to the throat. Local treatment may be limited to sprinkling with powdered starch and covering with wadding. To exert a mild compression, the skin may be painted daily with:—

849. R.	Collodion,	f.ʒi	
	Glycerins,	f.ʒij.	M.

Great tension of the skin may be relieved by warm poultices or by superficial punctures. In violent inflammation, ice-bags and ice-water compresses are indicated.

MR. JOHN HIGGINBOTTOM, LONDON.

This surgeon maintains (*Practitioner*, January, 1869), after forty years' experience, that no agent is so safe, powerful and efficacious as the nitrate of silver. The affected part should be well washed with soap and water, then with water alone, to remove every particle of soap, which would decompose the nitrate, and then be wiped dry with a soft towel. He employs the following solution:—

850. R.	Argent. nitrat.,	ʒiv	
	Aquæ,	f.ʒss.	M.

This should be applied two or three times carefully over the affected surface and beyond, on the healthy skin, to the extent of two or three inches, by means of a piece of clean linen attached

to the end of a short stick. In the course of twelve hours it will be seen whether the solution has been well applied; if any part of the inflamed surface be found unaffected, the application must be repeated. By applying the nitrate so as to encircle the inflamed part, the extension of the disease may be sometimes arrested. Iodine (see below) is preferred by some physicians.

DR. RUSSELL REYNOLDS, LONDON.

Several preparations of *iron* have been supposed, by various surgeons, to exert a specific effect on erysipelas. VELPEAU used the sulphate; but the most popular has been the chloride of iron. Dr. RUSSELL REYNOLDS advises the following formula:—

851. R. Tincturæ ferri chloridi,
Spiritus chloroformi,
Glycerinæ, aa f. ʒj
Aquæ, f. ʒiij. M.

One tablespoonful in a wineglassful of water every four hours.

So soon as the first effects of this medicine, which are often seen after the second dose (*i. e.*, the local inflammation ceasing to extend, the inflamed part becoming paler, less tender, less swollen, the feeling of exhaustion diminishing, and with it the exaggerated frequency of the pulse and the exalted temperature, and frequently sleep ensuing), the quantity of the tincture may be reduced. Alcoholic stimulants are frequently indicated in connection with this treatment. Cool lotions should be avoided, the only local applications called for being hair-powder and cotton or wadding, to protect the parts from cold currents of air.

The Germans use *Bestuscheff's mixture*, the ethereal tincture of chloride of iron, the latest improved form of which is:—

852. R. Tincturæ ferri sesquichloridi, 1 part
Spiritus ætheris nitrosi, 14 parts.
Mix and expose to the rays of the sun in well-closed bottles, till the brownish color disappears. One to two teaspoonfuls every three hours.

It is well, in this connection, to note that Dr. CHARLES BELL, of Edinburgh, who strenuously advocates the treatment of erysipelas by tincture of *muriate* of iron, holds that a natural difference exists between the effects of the two so-called similar preparations of iron—viz., the *muriate* and the *perchloride*. He insists par-

ticularly on the administration of the former preparation in full and frequent doses.

PROFESSOR ROBERTS BARTHOLOW, CINCINNATI.

This writer attributes to *belladonna* "a real curative power in erysipelas," especially in idiopathic and facial erysipelas. It may be combined with aconite or digitalis, if the fever is high; with quinia, if there is depression.

853. R. Quinæ sulphatis, ʒss
Belladonnæ extracti, grs. iij. M.
Make ten pills. One every four or six hours.

He questions the value of the chloride of iron treatment, but believes that by the local use of nitrate of silver effective results may be obtained in traumatic erysipelas. For the facial variety, he prefers inunctions of oil and cocoa butter.

DR. BÉHIER, PARIS.

854. R. Tamarindi, ʒiss
Mannæ, ʒj
Aquæ, f. ʒx.
Boil, and add toward the end,
Potassii bitartratis, ʒvj
Antimonii et potassii tartratis, gr. iss. M.

To be given in four or five doses, at the intervals of an hour, in the commencement of erysipelas. If there be delirium, order an enema of musk and opium.

855. R. Antimonii et potassii tartratis, gr. ʒ
Sodii sulphatis, ʒiv. M.
Add to a pint of veal broth, and give a cupful every one or two hours, as a sedative in the beginning of acute erysipelas.

856. R. Spiritus camphoræ, f. ʒj
Infusi sambuci florum, Oj. M.
A useful fomentation in erysipelas.

RÉSUMÉ OF REMEDIES.

Aconite was a favorite remedy, in sthenic cases with much febrile action, of the late Mr. LISTON, of London.

**Ammonii Carbonas* is strongly recommended by Sir THOMAS WATSON, who precedes its use by a purgative.

Belladonna, in repeated doses of gr. ʒ, is often of benefit in reducing arterial excitement. Its effects are enhanced by the previous administration of aconite.

Ferri Bromidum has been employed, with good results, by a number of American physicians.

Chloras, in combination with the tincture of cinchona, is recommended by Dr. COPLAND in erysipelas supervening upon anasarca, or if there be any tendency to gangrene, or if the temperature of the surface be low and the color deep or dark.

Sulphas is indicated in all cases where the tongue becomes clean and the skin moist, and should at once be resorted to if the pulse be soft, tremulous, or very rapid, the heat moderate, and the delirium low and muttering, or if suppuration or sloughing has commenced. In such cases it may be combined with the tincture of the chloride of iron, with great advantage.

Sulphis (as also the bisulphite, and the hyposulphite, and sulpho-carbulate of soda) is strongly recommended by Professor POLLI, of Milan.

Intina Oleum has been given with great benefit when the coma has been intense, the pulse sinking, and the tongue dry and glazed. Dr. COPLAND counsels the local application of turpentine epithems.

LOCAL APPLICATIONS.

Lard inunction is regarded by ERASMUS WILSON as superior to all fluid applications. He first relaxes the skin with hot water or steam, then saturates the surface with hot lard, and afterward covers with wool.

Carbonas allays the irritation of the surface. The following lotion, recommended by ERASMUS WILSON, may be employed :—

857. R.	Ammonii carbonatis,		
	Plumbi acetatis,	ss	3j
	Aquæ rosæ,		f. 3viij. M.

inim. Dr. GOLDSMITH, U. S. A., recommends (*American Medical Times*, 1863) the following solution :—

858. R.	Brominii,	3j	
	Potassii bromidi,	gr. clx	
	Aquæ destillatæ,	q. s. ad. f. 3iv.	M.

Chlorinata. The following solution has been found of benefit :—

859. R.	Calcis chlorinatæ,	3j-ij	
	Aquæ,	Oj.	M.

The parts should be kept constantly wet with this lotion.

Sulphas was much employed by VELPEAU, both in solution and in ointment :—

860. R.	Ferri sulphatis,	3j	
	Aquæ,	Oj.	M.

861. R.	Ferri sulphatis,	3ij	
	Adipis,	3j.	M.

ina is of great service, by allaying irritation and preventing the action of the air.

toxyli Lignum has been found by M. DESMARTIS (*Medical Times*, June 14th, 1862) of value in severe traumatic erysipelas, applied in ointment :—

862. R.	Extracti hæmatoxyli,	ss	3ss.	M.
	Adipis,			

Hydrargyri Chloridum Corrosivum was found by Dr. DEWEES to be as effectual as mercurial ointment, when applied in the following solution:—

863. R. Hydrargyri chloridi corrosivi, gr. j
Aquæ, f. ʒj. M.

Hydrargyri Unguentum sometimes arrests the course of the disease, when smeared over the parts three or four times. It usually causes salivation.

**Iodine*, painted over the inflamed parts, often quickly alleviates the symptoms. By many it is preferred to the nitrate of silver solution.

Plumbi Subacetatis Liquor Dilutus, kept constantly applied, soothes the parts. *Potassii Permanganas* is recommended by Dr. LEAVITT (*Braithwaite's Edrospect*, vol. vi, 1867), in the following solution:—

864. R. Potassii permanganas, gr. xxx
Aquæ, ʒj. M.

Sulphureosum Acidum, with equal parts of glycerine, has been found to arrest the spread of the inflammation and relieve the burning.

GOUT.

DR. HENRY W. FULLER, LONDON.

For the purpose of clinical instruction, Dr. FULLER divides cases of acute gout into two classes, namely: 1. Cases in which the excretory organs are originally sound and functionally active—cases in which the attack of gout is due principally to excess and indiscretions of diet; and 2. Cases in which the excretory organs are in some way disordered, and fail in performing their eliminatory functions—cases in which the patient is not necessarily guilty of indiscretions of diet, but in which the liver and kidneys fail in their action, either as the result of functional disorder, or of organic change in their structure.

The first class of cases correspond with those which pass under the name of asthenic gout; the tongue is usually furred, the urine loaded, and the bowels are commonly torpid. In these cases, until the acute symptoms have subsided, Dr. FULLER restricts the diet to liquids, administers a saline draught containing sulphate and carbonate of magnesia, and a few drops of colchicum wine; occasionally gives an aperient pill containing calomel, aconite and opium, and wraps the joints in finely carded wool, or in flannels steeped in a solution of soda and laudanum. As the acute symptoms subside, a more generous diet is permitted, and some light,

Salicin, in one to two-scruple doses, three to six times daily, is an efficient remedy in mild intermittents.

DR. CLEMENS, PARIS.

888. R. Acidi arseniosi,
Potassæ carbonatis, ss ʒj.
Dissolve in water, f.ʒix, and add brominii, ʒij. Keep in the dark, and shake frequently, for four weeks. Three or four drops, in water, twice a day.

889. R. Extracti eucalypti, ʒij
Tincturæ cinchonæ, f.ʒiij. M.
One or two teaspoonfuls three times daily.

The eucalyptus has not yet met the expectations of American physicians.

890. R. Quiniæ sulphatis,
Ferri redacti, ss ʒj
Acidi arseniosi, gr.ij
Piperinæ, ʒiiss. M.
Make twenty pills. One three or four times a day. A favorite prescription, in obstinate chills, with some Southern physicians.

The *hypodermic* use of quinine is of extreme value in severe congestive and comatose cases, and elsewhere when, for any reason, it cannot be administered by the mouth. The following formula, containing gr.iv to f.ʒj, is an appropriate one:—

891. R. Quiniæ sulphatis, gr. xxxij
Alcoholis diluti, f.ʒvijs
Aquæ ammoniæ, f.ʒss. M.

In the *enlarged spleen*, often associated with leucocythemia, which so frequently follows malarial disease, the iodide of ammonium, gr.v three times a day, with inunctions of the red iodide of mercury, has been found efficient. Dr. DA COSTA prefers, however, the treatment by the hypodermic administration of ergotine, gr.iii-v daily, which has certainly produced excellent results.

MILK SICKNESS.

DR. J. C. PATTON, OF INDIANA.

This practitioner describes (*Indiana Journal of Medicine*, Aug. 1875) a treatment which, he says, "almost deserves the character of a specific:"—

892. R. Infus. sennæ foliarum, Oj
Magnesiæ sulphatis, ℥xij. M.

Of this give from one to two ounces, which will be vomited; then immediately give a second dose, and so continue until it is retained.

Large injections of cold whiskey and water should be thrown well up the rectum. For milder cases, sulphur, in free doses, until the bowels are moved, followed by diffusible stimulants, is sufficient.

PURPURA HÆMORRHAGICA.

PROF. E. TROUSSEAU, PARIS.

893. R. Ferri et potassii tartratis, ℥i-ij
Acidi tartaraci, gr. iij
Syrupi tolutani, f. ℥j
Aquæ cannellæ, f. ℥v
Aquæ destillatæ, f. ℥iijss. M.

A tablespoonful from hour to hour, in purpura hæmorrhagica.

RÉSUMÉ OF REMEDIES.

Ergot should be combined with tonics, and will be found of value.

Ferrum is always useful. The following prescription is a good one:—

894. R. Ferri sulphatis exsiccata, ℥ij
Quinæ sulphatis, ℥j
Strychniæ sulphatis, gr. ss. M.

Make twenty pills; one thrice daily.

Sulphuricum Acidum sometimes acts happily in purpura.

Terebinthina Oleum is an important agent in the treatment of purpura. It should be given in emulsion.

ACUTE RHEUMATISM.

SALICIN AND SALICYLIC ACID TREATMENT.

DR. T. MACLAGAN, DUBLIN.

This author (*Lancet*, March, 1876), praises the action of *salicin* in acute rheumatism. Relief is afforded in forty-eight hours or less:—

895. R. Salicin.

gr.xv.

This amount in water every three hours.

Later observers corroborate this statement; gr.x, every two hours, is preferred by some.

Decoction of the inner bark of the willow (*Salix fragilis*, etc.), which contains the active principle, *salicin*, has also been used with excellent results.

Salicylic acid, now produced by synthesis, was formerly derived from salicin. Dr. L. TRAUBE, of Berlin, and many following him, give it high praise in acute and subacute rheumatism. It disperses the fever and soothes the pain. Grains xv to xxx in powder, in a capsule, may be given every hour. Or,

896. R. Acidi salicylici,
Sodæ boratis,
Glycerinæ,
Aquæ menthæ,

℥ss
3i
f.℥j
f.℥v.

M.

A tablespoonful as occasion may require.

The borax makes the acid more soluble.

Dr. STRICKER, of Berlin, in a resumé of his experience with salicylic acid, says:—

1. If the salicylic acid act thoroughly in the manner expected of it, there should be, during the treatment of articular rheumatism by a certain quantity given internally, no return of the disease in a hitherto unaffected joint, nor any secondary inflammation of the endocardium or other serous membranes.

2. In order to prevent a relapse, it is necessary to continue the use of the salicylic acid in small doses for some days after the end of the principal treatment.

3. Salicylic acid is of doubtful use in chronic articular rheumatism.

4. It is not likely to be useful in gonorrhœal and dysenteric rheumatism, or in septicæmic inflammation of the joints.

THE ALKALINE TREATMENT.

DR. H. W. FULLER, OF LONDON.

The treatment of rheumatic fever adopted by Dr. FULLER, at St. George's Hospital, is *essentially alkaline*, and consists not only in administering salines and small doses of alkalies, but in pushing alkalies, as rapidly as possible, to the point of producing alkalinity of the secretions. He usually prescribes:—

897. R.	Sodæ bicarbonatis,	℥iss	
	Potassæ acetatis,	℥ss	
	Liquoris ammoniæ acetatis,	f.℥iij	
	Aquæ,	f.℥iss.	M.

For one dose. To be taken in a state of effervescence, in combination with

898. R.	Acidi citrici,	℥ss	
	Aquæ,	f.℥ij.	M.

The quantity of the fluid not only takes off from the nauseous quality of the medicine, but promotes its absorption, and thereby facilitates its action. As soon as the urine manifests an alkaline reaction, the dose is repeated three times only in twenty-four hours; and on the following day, if the urine still remains alkaline, twice only. After three days, two doses only of this mixture in twenty-four hours usually suffice to keep the urine alkaline; and then Dr. FULLER adds two grains of quinine to each dose; or, if quinine be not well borne, he substitutes:—

899. R.	Sodæ bicarbonatis,		
	Potassæ acetatis,	ss	℥ss
	Tincturæ cinchonæ,		f.℥iss
	Decocti cinchonæ flavæ,		f.℥iss.
			M.

For one dose.

Day by day, as the tongue cleans, and the other symptoms subside, the quantity of alkali is cautiously diminished, until a simple quinine draught is taken; but the condition of the urine is constantly watched, with a view to the immediate administration of a small quantity of alkali, should the least acidity call for its use. The diet is another point on which Dr. FULLER lays particular stress. He gives beef-tea or broth throughout, and, if stimulants appear to be needed, does not object to their being administered cautiously; but he withholds solid food until the tongue is quite clean, and has often proved to his class in the wards that a too early recourse to meat will induce a relapse, and prevent convalescence.

Under this treatment, Dr. FULLER says, the pains commonly subside in five or six days, and the patients are seldom ten days in bed. Moreover, the heart may be regarded as safe from attack; for in two instances only, in the whole course of his hospital experience, has inflammation, either of the endocardium, or pericardium, arisen after the patient has been twenty-four hours under treatment.

DR. FINCHAW, WESTMINSTER HOSPITAL, LONDON.

900. R. Potassæ bicarbonatis, $\bar{3}j$
 Potassæ nitratis, $\bar{3}ij$
 Liqoris ammoniæ acetatis,
 Aquæ, \bar{aa} f. $\bar{3}iij$. M.

A tablespoonful, in water, every four hours, with a full opiate at night, if the pain be severe.

He does not think it advisable to continue the alkaline treatment for any lengthened period; but to give quinine, in doses of two or three grains, every six hours, when the urgent symptoms begin to yield, especially if the sweating is over-profuse. He believes that, by giving quinine earlier than is generally the custom, convalescence is less tedious, and there is less chance of relapse. As regards cardiac complications, if pericarditis supervene, and there be sharp, catching pain, he applies a few leeches, followed by linseed poultices; should the pain be slight or absent, he omits the leeches. In all cases he applies, subsequently, one or more blisters. As to medicines, he continues the alkalies, giving at the same time a grain of opium every four or six hours. Should endocarditis manifest itself, he contents himself with the alkaline treatment, as he cannot satisfy himself that local remedies have any effect.

HENRY POWER, F. R. C. S., ETC., LONDON.

901. R. Tincturæ aconiti radicis, $\mathfrak{m}xxiv$
 Tincturæ colchici, f. $\bar{3}ijss$
 Aquæ camphoræ, f. $\bar{3}iv$. M.

A tablespoonful three or four times a day.

In feeble patients, in women, and in children of from ten to fourteen years of age, the quantity of each tincture may be reduced to one-half; and when the water is or has been high-colored, with deposits of the lithates, the bicarbonate and nitrate of potash, with a little spirit of chloroform or of nitric acid, may be advantageously added.

Our author has applied these remedies to a considerable extent in various cases of rheumatic disease for the last few years, and

914. R. Vini colchici seminis, f.℥j
 Potassæ acetatis, ʒvj
 Spiritûs ætheris nitrosi,
 Syrupi, aa f.℥j. M.
 A teaspoonful thrice daily, in pleurodynia.

Also use a stimulating liniment and keep the parts warm.

915. R. Potassii iodidi, ʒij
 Vini colchici radiceis, f.℥ss
 Extracti cinchonæ fluidi,
 Elixir cinchonæ, aa f.℥iss. M.
 A dessertspoonful thrice daily, in muscular rheumatism.

Cinchona disguises the taste of the iodide of potassium. Quinine is often serviceable alone in those cases in which the joints are not affected, and in which there is pallor and loss of strength.

916. R. Potassii iodidi, ʒij
 Tincturæ belladonnæ, f.℥iss
 Syrupi aurantii corticis, f.℥ss
 Aquæ, q. s. ad. f.℥iij. M.
 A teaspoonful thrice daily in muscular rheumatism associated with vesical incontinence.

In case of swelling and stiffness of the joints following acute rheumatism, nothing does so much good as *sulphur baths*. When practicable, send the patient to the sulphur baths of Virginia to get rid of these remnants of the acute attack. Artificial sulphur baths are also useful. When these are not practicable, great benefit will be obtained from the iodide of potassium and compound tincture of guaiacum.

917. R. Potassii iodidi, ʒij
 Tincturæ guaiaci compositi, f.℥vj. M.
 A dessertspoonful thrice daily.

This prescription is a very efficient though not an elegant one. It is very unpleasant to take. There are few who will go on with it for a long enough time to get its full therapeutical effects.

In the treatment of the *sub-acute form of muscular rheumatism*, nitrate of potash is very valuable. This is an old remedy, but the advance of therapeutics has shown no other, in this form of rheumatism, of which our author thinks so highly. It may be conjoined with Dover's powder.

918. R. Potassæ nitratis, gr. xv
 Pulveris ipecacuanhæ compositi, gr. iij. M.
 For one powder, to be taken every fourth hour.

speedy relief follows this treatment, after ordinary remedies have failed.

907. R. Potassii iodidi, ʒj
 Vini colchici radialis, f.ʒij
 Morphise sulphatis, gr. iij
 Syrupi, f.ʒj
 Aquæ, f.ʒij. M.

A teaspoonful three times a day, after meals, in muscular rheumatism.

908. R. Potassæ carbonatis, ʒij
 Potassæ acetatis, ʒij
 Vini colchici seminis, f.ʒj
 Syrupi tolutani, f.ʒss
 Aquæ, f.ʒss. M.

A teaspoonful thrice daily, in lumbago, the following liniment to be rubbed in night and morning :—

909. R. Chloroformi, f.ʒss
 Linimenti ammoniæ, f.ʒss
 Linimenti saponis, f.ʒij. M.

In a week or ten days, after the pain has subsided, apply :—

910. R. Emplastri picis cum cantharide, aa
 Emplastri Logani, equal parts. M.

The quickest way of treating lumbago is by throwing $\frac{1}{16}$ th of a grain of atropia under the skin near the affected muscles. This will sometimes dissipate the attack as if by magic.

911. R. Tincturæ guaiaci, f.ʒij
 Vini colchici radialis, f.ʒij
 Potassæ bicarbonatis, ʒss
 Syrupi aurantii corticis, f.ʒij. M.

A dessertspoonful in water, thrice daily, in rheumatic arthritis. Also have the joints wrapped in cotton, and painted, morning and evening, with equal parts of tincture of iodine and alcohol until they become sore. Sulphur baths are beneficial. Small blisters are also of service in the neighborhood of the joints, frequently repeated and dressed with :—

912. R. Morphise acetatis, gr. ʒ
 Pulveris marantæ, gr. j. M.

Arsenic is an excellent remedy in rheumatic arthritis. It may be administered as follows :—

913. R. Liquoris potassæ arsenitis, f.ʒij
 Potassii iodidi, ʒij
 Syrupi, f.ʒiij. M.

A teaspoonful thrice daily, between meals, in water.

exceeds the articular swelling, and as the urine is less highly charged with the lithates. During its use, its operation must be carefully watched, the bowels kept regulated, and if the lithates disappear from the urine, if the pulse become weak, if faintness, or nausea, or purging supervene, it must be discontinued. The acetous extract or the inspissated juice (gr.j-iss), or the wine (℥xv-xx), may be given twice or thrice daily.

Ferri Chloridi Tinctura has been employed by Dr. RUSSELL REYNOLDS, of London, in doses of about ℥xxx every six hours, with the effect of shortening the duration of the disease, and relieving the joint affection.

**Opium*, in large and repeated doses, is given by Sir D. CORRIGAN, of Dublin. He commences with gr.j every two or three hours, and increases the dose both in frequency and quantity until the patient feels decided relief, when it should be kept up at that dose until the disease is steadily declining. The average quantity required in twenty-four hours is about gr.xij, and even that amount does not affect the head; occasionally it produces diarrhoea, when astringents are required to check it. The tolerance of opium in this disease is remarkable.

Potassii Acetas is much employed. The dose usually given is about gr.xxx, every four hours.

**Potassii Bicarbonas* is a favorite remedy. Dr. A. B. GARROD, of London, gives gr.xxx in solution every four hours, until the joint symptoms and febrile disturbance have completely disappeared. Dr. FULLER, of London, considers that ℥iss is the minimum dose which will suffice to overcome the acid condition of the blood during the first twenty-four or forty-eight hours of treatment, and in sthenic cases ℥ij are often needed. Small doses he regards as useless.

Potassii Nitras. Dr. BASHAM, who instituted a series of experiments to ascertain the real value of nitre in acute rheumatism, arrived at the following conclusions:—1. That it is a most valuable remedy in doses of ℥ij-iiij in Oiv of barley-water, daily. 2. That it acts by restoring the saline constituents of the blood, and by lessening the excess of fibrine. 3. That there is a certain amount of exemption from cardiac complication, and that cardiac inflammation, when it supervenes, is more amenable to remedies. 4. That the tendency to collapse is much diminished, and the acute or inflammatory symptoms usually give way on the third or fourth day.

Potassii Bitartras, in doses of gr.xv-xx, every four hours, given in mint water alone, or in combination with tincture of hyoscyamus (℥xxx-xl), is said to produce good results.

Quiniae Sulphas, according to Dr. FULLER, should ordinarily only be used as a restorative when the febrile paroxysm is beginning to abate, and not as a cure during the active stages of the disease.

LOCAL APPLICATIONS.

Baths, Dr. N. J. BUTLER (*Medical Press*, August 5th, 1868), has found great benefit in acute rheumatism from baths containing valerian. He directs:—

923. R. Valerianæ radicis, ℥j
 Aquæ, C.j.

Boil together for a quarter of an hour, strain the liquor and add to an ordinary bath at 98°, the patient remaining in it for twenty or thirty minutes.

For any remaining inflammation about the joints, he applies lin-

seed-meal poultices, prepared with a strong decoction of valerian. In the arthritic form of the disease, he considers valerian of extraordinary efficacy in subduing the pain and inflammation.

Prof. DA COSTA, of Philadelphia, recommends sulphur baths, artificial or natural, for the swelling and stiffness of the joints following acute rheumatism.

**Blisters.* The blister treatment has been prominently advocated. Dr. HERBERT DAVIES directs armlets, wristlets and even fingerlets of blister-plaster to be applied at the time the inflammation is most acute, linseed-meal poultices being subsequently applied to keep up the serous discharge. He places these blisters entirely around the affected limbs, and in the case of the knees, orders them at least three inches wide, regarding any slight strangury which may arise as of little importance compared with the benefit afforded by the free vesication. This treatment may be aided by a *mild* course of alkali, but he does not regard this as essential, excepting when the rheumatic virus attacks the heart in the first instance and seems to hesitate in fixing itself upon the joints. Dr. RINGER, of London, considers all the alleged good effects may be obtained by the use of "flying blisters." Dr. A. FLEISCHMAN (*Lancet*, May 1st, 1869), looks upon a blister, about two inches square, placed an inch and a half below the left clavicle, as an almost certain preventive of cardiac mischief.

Salicylic Acid.

SCROFULA.

PROFESSOR J. LEWIS SMITH, M. D., NEW YORK.

As scrofula is an essentially hereditary disease, its treatment must commence in infancy. The most enlightened rules of diet and hygiene must be observed. Of the strictly medicinal agents, cod-liver oil is the most useful. It possesses real value in the erethitic form of the diathesis, but none in the torpid form. Iodine, internally, is especially serviceable in glandular hyperplasia. The iodides of iron and starch are the best forms. The latter may be given by dropping one to five drops of the official tincture of iodide on a little powdered starch, and giving it in syrup.

For the *swollen glands* the official preparations of iodine are too stimulating. The following is better:—

924. R.	Potassii iodidi,	ʒi	
	Extracti stramonii,	ʒj.	M.

To be rubbed over the gland several times daily.

Or,

925. R.	Liquoris iodinii compositi,		
	Glycerinæ,	aa	ʒss. M.

To be applied three times daily, with thorough friction, till the skin is irritated.

DR. HARDY, PARIS.

932. R. Hydrargyri iodidi rubri,
Adipis, aa ʒij. M.

A useful ointment in scrofulous skin affections, when there is no ulceration, or when it is superficial. Spread a layer of the ointment on the affected part, which causes a sort of artificial erysipelas, which is nearly as beneficial as a natural erysipelas.

DR. DUVAL, PARIS.

933. R. Camphoræ,
Extracti conii,
Plumbi iodidi,
Adipis, aa ʒj ʒj. M.

To be rubbed on scrofulous tumors, to favor their resolution.

PROF. GUÉNEAU DE MUSSY, M. D., PARIS.

934. R. Ammonii carbonatis pulveris, Div
Camphoræ pulveris, gr. xv
Adipis, ʒj. M.

To be rubbed on the indolent cervical ganglions of scrofulous patients.

935. R. Magnesi sulphatis, ʒj
Adipis, ʒj.

Dissolve the salt in a small quantity of water and incorporate with the lard. Useful in scrofulous engorgements. It causes sometimes a pustular eruption, like antimonial ointment.

RÉSUMÉ OF REMEDIES.

Ammonii Iodidum is useful in scrofula attended with glandular enlargement.
Barii Chloridum is especially valuable when languid circulation and irritability of the mucous surfaces are present. It is said to be particularly adapted for females with menstrual irregularity. The following formula may be employed :—

936. R. Barii chloridi, gr. x
Tincturæ ferri chloridi, f.ʒij-iv
Syrupi aurantii, f.ʒx. M.

One or two tablespoonfuls two or three times a day.

Bromine is a useful remedy. The following solution is a good one for external administration :—

937. R. Brominii, m℥
Aque, f.ʒvij. M.

To commence with, gtt.vj, three or four times daily.

Calcis Aqua is sometimes productive of benefit in long-standing scrofula, when gland after gland is attacked. A tablespoonful should be given in milk three or four times a day.

Calcis Phosphas Præcipitata has been recommended as an excellent palliative. In scrofulous ulcers it is given with benefit, in doses of gr.vij-xx daily, taken with the meals, so as to be thoroughly mixed with the

food. In scrofulous diarrhœa, good results are obtained from doses of $\mathfrak{r}\mathfrak{o}$ gr.vj-x daily.

Ferri et Ammoniac Citras is a useful remedy, particularly recommended by its mild taste, which adapts it for administration to children.

Ferri Bromidum has been recommended, in ointment, as an application to scrofulous swellings:—

938. R. Ferri bromidi, aa 1 part
Glycerinæ, 14 parts. M.
Adipis,

**Ferri Iodidum*, in the form of the officinal syrup, is a powerful remedy in all forms of scrofula.

**Iodinium* and its compounds are the most efficient remedies we possess in scrofulous affections. They are employed both externally and internally.

**Morrhua Oleum* is of the greatest benefit in the scrofulous or tuberculous diathesis, but scrofulous glandular enlargements are generally but slightly influenced by it. After, however, suppuration has taken place, the action of the oil is more manifest. Discharges from scrofulous abscesses often speedily disappear under its use. In scrofulous diseases of the skin, joints and bones, as well as in scrofulous ozena, otorrhœa and ophthalmia, it is productive of excellent results, when persevered in and accompanied by good hygienic treatment.

Phosphoricum Acidum Dilutum has been strongly recommended, in doses of $\mathfrak{m}\mathfrak{v}$, gradually increased to $\mathfrak{m}\mathfrak{x}\mathfrak{x}$, or more, in infusion of calumba. Thus given, it may be continued for a long time, without unpleasant effects.

Potassii Chloras, in doses of gr.v-xx, four times daily, in pure water, is highly spoken of as a remedy in scrofulous enlargements and ulcerations. As a local application to swellings and enlarged scrofulous joints, the following ointment may be used:—

939. R. Potassii chloratis, $\mathfrak{z}\mathfrak{i}\mathfrak{j}$ M.
Adipis, $\mathfrak{z}\mathfrak{j}$.

Potassæ Liquor, in doses of $\mathfrak{m}\mathfrak{x}\mathfrak{x}\mathfrak{x}$ -lx, three times a day, is said to frequently diminish scrofulous tumors, without, however, exerting any influence on the diathesis.

Potassii Iodidum, given alone, does not seem to exert much influence in scrofula, but combined with iodine, it increases the activity (and solubility) of the latter remedy. In combination with quinine, it is very useful in scrofulous ophthalmia.

Sulphur formerly enjoyed a good reputation in the treatment of scrofula, but it has fallen into disuse. Attention has lately been called to it as a valuable remedy.

940. R. Sulphuris, $\mathfrak{z}\mathfrak{i}\mathfrak{j}$ -iv
Syrupi, $\mathfrak{f}\mathfrak{z}\mathfrak{j}$
Aquæ, $\mathfrak{f}\mathfrak{z}\mathfrak{v}\mathfrak{i}\mathfrak{j}$. M.

Two tablespoonfuls, once or twice a day, in a tumblerful of milk.

Zinci Iodidum has been used externally in enlarged lymphatic glands.

941. R. Zinci iodidi, $\mathfrak{z}\mathfrak{j}$ M.
Adipis, $\mathfrak{z}\mathfrak{j}$.

TYPHOID FEVER.

PROF. KARL LIEBERMEISTER, M. D., OF TÜBINGEN.

This writer, whose essay on typhoid fever forms part of Ziemssen's *Cyclopædia*, believes it possible that both iodine and calomel may exert a specific influence in cutting short an attack of typhoid fever, if given early. He gave iodide of potassium, ℥j-3j, in the twenty-four hours; and when he employed calomel, gr.viii, three or four times in the same period. He prefers the latter, and recommends it in the stage of the disease before the ninth day.

His main reliance, however, is *the antipyretic treatment*. This is to be carried out by cold baths and quinine. For adults, the full-length cold bath, 60° to 68° Fahr., is to be preferred. The duration of the bath should be ten minutes; but if the patient is feeble, seven or five minutes. After the bath, the patient is to be wrapped in a dry sheet, put to bed, and given a glass of wine. In very severe cases, the bath should be repeated every two hours; the average cases require four to eight baths daily. *Contra-indications* to the baths are hemorrhage and perforation of the bowels, weakness of the heart's action, and extreme debility.

Quinine comes next as an antipyretic. But it must be given without timidity, and in a definite manner, as follows: from gr.xxij to gr.xlv *must positively be taken within the space of half an hour, or, at most, an hour*. Six or eight grains every ten minutes is a good rule. If this is boldly done, cinchonism is produced, and a material fall of temperature follows. This dose is repeated once every forty-eight hours; or, if the remission is not marked, once in twenty-four hours, the quantity being increased. When the fever spontaneously manifests a tendency to remissions, the quinine is of little value. This dose should reduce the temperature in the rectum to 100° Fahr. Of the two antipyretics mentioned, our author would generally rely on the quinine, if it is properly given.

When the fever is of such obstinacy that additional antipyretic effects are required, he usually gives from eleven to twenty-two grains of powdered digitalis, extended over a period of about thirty-six hours; this should be followed by a full dose of quinine, say gr.xl, in one hour, as above directed.

The diarrhœa he controls with opium, in small and repeated doses; meteorism with cold compresses to the abdomen, changed

every half-hour; cold enemata, and frictions with turpentine; hemorrhage from the bowels with opium (gr.ij, in the twenty-four hours), ice to the abdomen, and perfect quiet.

DR. SIREDEY, FRANCE.

This practitioner gives in the first instance, especially in those cases in which the gastro-intestinal symptoms (coated tongue, nausea and diarrhoea) are present, twenty grains of ipecacuanha with half a grain of tartar emetic, weak wine and water for drink and beef-tea. The next day, julep of gum, four ounces, with thirty grains of liquid extract of cinchona, taken in divided doses, and an injection containing vinegar or carbolic acid. Several times a day the mouth of the patient is very carefully cleaned with a slice of lemon; morning and evening the body is sponged with a lotion containing vinegar, and is immediately rolled up in wool. This proceeding is peculiarly grateful to the patient. A glass of Seidlitz water is often given in the course of the disease; and as convalescence sets in quinine is ordered in all its forms.

PROF. S. JACCOUD, PARIS.

This able clinical teacher, like most French and English physicians, discredits the cold bath treatment of typhoid. He abjures from the commencement all debilitating measures, such as purging. If needful, a mild laxative of Seidlitz water is given. During each twenty-four hours the patient takes a cordial mixture containing two or three scruples of extract of cinchona bark, two drachms of tincture of cinnamon, an ounce of syrup of orange peel, three ounces of red Bordeaux wine, and an ounce of brandy, which may be increased, as occasion requires, to three or four ounces. The main constituent of the food is beef-soup, given at least twice daily; about eight ounces of old Bordeaux wine is allowed, and this is taken alternately with the stimulant mixture just mentioned. The ordinary beverage is lemonade, containing one-fourth of red wine. If it appear needful, all this is supplemented at the end of the second week by nutritive enemata daily. This mode of alimentation is stated to be well tolerated by the stomach and bowels.

When the patient's temperature reaches 102° Fahr., with in the evening not above 103°, M. JACCOUD directs that twice a day the whole body should be well sponged with aromatic

gar. If the temperature rises higher, three, or even four, of these applications are made daily. They are continued, more or less frequently, until the close of the fever, and both comfort and benefit are derived from their refreshing and cooling effects.

Should any threatenings of bronchial or pulmonary implication arise, they are met by dry cupping.

BOSTON CITY HOSPITAL.

The treatment at this hospital, as practiced under the surveillance of Drs. STEDMAN and DRAPER, is a modification of the bathing process, occupying an intermediate position between the full carrying out of cold-water bathing and the expectant treatment. On entrance, patients are immediately put to bed, and their diet restricted to milk, of which they are expected to drink about two and a half quarts in twenty-four hours. This is perhaps the most important part of the treatment; at first they may object to milk, but on becoming accustomed to it they take it freely. To keep up the strength is the chief aim, and if insufficient nourishment is taken, by giving a small amount at regular intervals the end sought for is accomplished. This diet is continued till the temperature has been normal for several days, when light soups and easily digested farinaceous articles are given; in a few days more, a gradual return to regular though still somewhat restricted diet is allowed.

To lower the temperature sponge-baths, of equal parts of cold water and alcohol, are quickly applied to the surface of the body, which is immediately dried.

In mild cases of diarrhoea nothing is done, two or three loose dejections per diem not being considered harmful; when, however, it becomes excessive it is quickly checked by a pill composed of a grain of opium and a quarter of a grain of sulphate of copper.

In delirium and wakefulness, when the patient can be made to tolerate it, the ice-cap is of great benefit.

The frequent use of a mouth-wash, of equal parts of glycerine and rose-water, is very pleasant to the patient, relieving the foul taste and dryness of the mouth.

In very mild cases twenty drops of dilute nitro-muriatic acid may be given every two hours.

Excepting the medicines above mentioned, no drugs are given, but every attention possible is shown to the comfort, nourishment, sleep and general welfare of the patient.

THE ANTISEPTIC TREATMENT OF TYPHOID.

Although this method of treatment cannot be considered as established, there has been enough testimony in its favor to commend it to careful consideration. In 1870 Dr. G. WILKES, of England, recommended the administration of *sulphurous acid* *acidum sulphurosum*, in enteric fever, and in this country Dr. J. WESLEY BOTKIN, of Illinois (*Medical and Surgical Reporter* May, 1876), and others have testified to its efficacy. The dose is from gtt.x-xx every three or four hours, in lemonade. It can be combined with opium or digitalis. It should be continued until the tongue is perfectly clean.

In the *Practitioner*, September, 1873, Mr. STEPHEN SKINNER reports very excellent results from the *sulpho-carbolate of soda*. He generally commenced with gr.xx every four hours, gradually increasing during the next four days to the full dose of gr.xxx. A larger dose than this may produce cerebral symptoms. When the diarrhoea was excessive, opium was combined with the salt. He also claims that by its early use the premonitory symptoms of the disease are dispersed, and the threatened attack aborts.

SMALL-POX—VARIOLA.

W. H. BARLOW, M. D., MANCHESTER, ENGLAND.

Dr. BARLOW has no doubt that the exclusion of light exerts a retarding influence upon the progress of the pustules in their later stages, as that, instead of acuminating in the usual way, they shrink and shrivel about the sixth or seventh day of the eruption. But some recent cases of confluent small-pox have led him to believe that death may have resulted from the exclusion of light, the poison having, by the abstraction of the accustomed stimulus, been prevented from taking its usual course to the skin, just as patients die from the suffusion of the exanthem of scarlatina or measles. This view, which he supports by the history of a number of cases, leads him to the conclusion that the mode of treatment of small-pox by the exclusion of light, although very useful in the lighter cases of unmodified, and in all cases of modi-

fied small-pox, should be employed with caution in the graver cases of a confluent character (*Lancet*, July 1, 1871).

RÉSUMÉ OF REMEDIES.

Camphor is advantageously employed, particularly in confluent or malignant small-pox, when the vital power is greatly depressed. It may be given alone or in combination with opium.

Carbolic Acid has been administered with marked benefit. It is more useful at an early stage of the disease, although, given afterward, it much modifies the symptoms, and hastens the curative process.

942.	R.	Acidi carbolici,			
		Acidi acetici,	āā	f. 3j-iss	
		Tincturæ opii,			
		Spiritus chloroformi,	āā	f. 3j	
		Aquæ,	ad.	f. 3 viij.	M.

A tablespoonful every four hours, till the fever subsides. After the first dose, the mixture is rather grateful to the patient than otherwise.

* *Opium* often fails to procure rest in the early stage of small-pox, but in the advanced stage of the disease patients who are wakeful, but otherwise doing well, are benefited by it, given once or twice. But neither it, nor any other anodyne, is to be given when there is copious salivation and mucous expectoration, as the patient may die asphyxiated during sleep, from the secretion accumulated in the air-passages.

Sodæ Sulphis. The sulphites are recommended by Professor POLLI, of Milan, as mitigating the febrile action, rendering the confluent and malignant forms benignant, shortening the course of the milder forms, and in all cases accelerating convalescence.

Sulphuricum Acidum Dilutum. In confluent small-pox, treatment by dilute sulphuric acid, m_{xv}-xx, with gr. j of quinine, every three or four hours, together with stimulants and nutritives, is an excellent one.

TO PREVENT PITTING.

Amylum. A thick mucilage of starch has been used as a local application to prevent pitting, with excellent effect. The entire surface of the body should be first sponged with tepid water.

Argenti Nitras. VELPEAU and other French writers recommended the practice of opening each vesicle on the third or fourth day of the eruption, and touching each with a stick of the nitrate scraped to a point. This, however, is a tedious and painful process, not unattended with danger. It has been recommended to wash the face on the fourth or fifth day with a strong solution of the nitrate.

Calceis Aquæ. The application of cotton-wool, soaked in a mixture of equal parts of lime water and olive oil, is said to be an efficacious one.

Carbolicum Acidum. Dr. H. YATES reports a case (*Lancet*, January 25th, 1868) treated with success by the following ointment:—

943. R. Acidi carbolici, ℥ij
Adipis, 3ij. M.

The ointment was colored with lampblack, and applied thickly spread on wadding. It was changed every second day, the parts

953. R. Olei sabinæ, grt.vj-xij
 Sacchari albi, gr.lx. M _____
 Divide into six equal powders. Put in waxed paper. Take one powder three times daily.

954. R. Pulveris frondis sabinæ, gr.lxviij
 Croci sativi, gr.xxiij
 Olei sabinæ, grt.viij
 Extracti gentianæ, q. s. M -
 For sixty pills. From three to five pills two to three times daily.

Or, direct crocus and borax, as follows:—

955. R. Boracis venalis, gr.xxxiv
 Croci sativi, gr.xiiij
 Sacchari albi, gr.xxiij
 Olei menthæ piperitæ, grt.j. M -
 Divide into six powders. One powder three times a day.

Amenorrhœa is often more certain to be cured by putting an end to serous or bloody discharges from various organs by treating for an improved condition of the blood with good nourishment and a corresponding regimen, with iron, preparations of cinchona, cold washing, etc., than by the employment of emmenagogues without any plan.

For outward application, the following are useful:—*Warm uterine douche; brushing the mouth of the womb with tincture of iodine; leeches to the portio vaginalis uteri, to the labia pudendi, to the inner side of the thighs, or to the perineum; dry cuppings and mustard poultices to the inner sides of the thighs; warm stimulating fomentations, with mustard, salt, potash, or aqua regia; warm sitz baths, or half-baths; bath at Ems, etc.* In many girls marriage is the first thing that regulates the menstruation.

RESUME OF REMEDIES.

Aconite may be employed, in the form of the extract, with advantage in amenorrhœa. Dr. KNEBEL, of London, recommends it in the sudden suspension of the menses, as from cold.

Aloe, in a small quantity, containing gr. i. compared at the proper menstrual period, is said to be a very certain emmenagogue. Dr. F. TILT, of London, recommends its internal administration combined with purgatives. It is frequently combined with myrrh.

Ammuni has been in the hands of Dr. ALEX. in gr. i. doses three times a day, in cases of amenorrhœa marked rather by general feebleness than by anæmia, has occasionally secured a regular flow, and considerably improved the cure. But of this as of all other emmenagogues it is pre-eminently true that it is worth absolutely nothing if not exhibited previously on the 2d invasion.

VII. DISEASES OF WOMEN.

The Constitutional Treatment of Diseases of Women—Abortion—Amenorrhœa—Chlorosis—Dysmenorrhœa—Mammary Diseases—Menorrhagia—Ovarian Diseases—Pruritus Vulvæ and of Pregnancy—Uterine Diseases—Vaginismus—Vaginitis (Leucorrhœa)—Vomiting of Pregnancy—Vulvitis.

THE CONSTITUTIONAL TREATMENT OF DISEASES OF WOMEN.

HENRY M. FIELD, M. D., OF BOSTON.

This writer lays proper stress upon the necessity of associating constitutional medication with topical applications in the treatment of diseases of women. He suspects that there is a too general tendency, in uterine therapeutics, to trust solely, or nearly so, to the employment of local medication. For instance, in many cases of constipation, complicating uterine disorders, when the nervous system is impaired and the blood poor, to give strychnia or belladonna, with the design of acting specifically upon a single function, and of restoring a condition of permanent health to the bowels, would be almost as short-sighted, and almost as much of a temporary expedient, as it would be to give purgatives. The impoverished blood must first be fortified and enriched before we can look for the normal performance of any important function; and accordingly there are patients, answering the condition described, in whom a course of iron, properly regulated, is the only general therapeutic agent that is necessary.

In some of his cases, he has found *arsenic*, and especially the *arseniate of iron*, very effective in removing constipation, and has sometimes received benefit from this agent when he had failed to make a successful impression with any of the more commonly used remedies.

He has been very much pleased, in cases of female difficulties in which iron has been indicated, with the action of *oxalate of iron*, a preparation first brought to notice by Prof. CRAIG, of the Smithsonian Institute. Being a light and tasteless powder, with nothing

repulsive in its appearance, it can be exhibited in that form to those occasional patients who are unable to swallow a pill. He values it particularly, because it is less liable to cause irritation or derangement of the stomach, or constipation of the bowels, where this common effect of ferruginous preparations is to be avoided, than is any other form of iron with which he is familiar. He has found it to agree with and benefit patients who, from past experience, believed themselves unable to take iron in any form.

ABORTION.

DR. ALFRED MEADOWS, OF LONDON.

Ergot is exhibited by this author in habitual abortion dependent upon a weakened atonic condition of the uterus (*Practitioner*, September, 1868). He commences in small doses (m̄v-vij extracti ergotæ liquoris, *British Pharmacopœia*), as soon as pregnancy is known to exist, and continues it in increasing doses (m̄xx-xxx), as long as it may seem necessary, certainly till after the period of the accustomed abortion, but with the occasional omission of a week or two. In unsuitable cases, this mode of treatment may be productive of mischief, for, as Dr. MEADOWS remarks, its employment is a matter of extreme delicacy, requiring a very careful discrimination of the cause of previous abortions and of the actual present condition of the uterus.

On the general use of *opium* in abortion, it may be concluded, from the evidence offered, that it is of value in *threatened abortion* arising from accident, from mental causes, or from habit, when it may be given by the mouth, or in a cold starch injection thrown into the bowel, repeated every night, or oftener, according to circumstances; the application of cold, perfect quiet and unstimulating diet being at the same time enforced. When, however, abortion is threatened from fetal disease or imperfection, so that the premature emptying of the uterus is but an effort of nature to get rid of what she cannot accomplish, opium does harm, by retarding emptying of the uterus, which must sooner or later take place. *Abortion has taken place*, opium allays excitement, tranquilizes circulation, and procures sleep.

DR. FREDERICK T. ROBERTS.

This writer on *Practice* considers *aloes* the best form of aperient, either the extract, or as *pil. aloes cum myrrha*. For the unpleasant sensations in the stomach, bismuth, with hydrocyanic acid, is particularly valuable. For the pain in the side often complained of, a belladonna plaster is usually efficacious. Iron is the great remedy; and it is frequently desirable to change the form of the preparation from time to time.

PROFESSOR A. P. REID, OF MONTREAL.

This writer (Canada *Medical Record*, 1875) has adopted, with signal success, in uncomplicated chlorosis, the use of *liquor potassæ*, gtt.x-xv, in mucilage, thrice daily. It defibrinizes the blood, and often acts promptly for good where iron is of no avail.

DR. BRETONNEAU, FRANCE.

962. R. Ferri redacti, 3ij
 Quinise sulphatis, aa gr.vij
 Zingiberis pulveris, aa
 Extracti cinchonæ, aa 3j
 Extracti, aa gr. iij. M.
 Aloës socotrinæ, gr. iij.
- Divide into fifty pills. One to five a day. These pills have the advantage of not causing constipation.

DR. GALLARD, PARIS.

963. R. Ferri carbonatis, 3ijss
 Extracti cinchonæ, aa gr.xv. M.
 Extracti opii, gr.xv.
- Divide into one hundred pills. From two to four a day, principally at meal times.

When there is constipation, this formula ought to be modified as follows:—

964. R. Ferri carbonatis, 3ij
 Extracti cinchonæ, aa 3iss
 Extracti rhei, aa gr.xv
 Extracti opii, gr.xv
- Divide into one hundred pills. To be taken as above.

RÉSUMÉ OF REMEDIES.

Aloes. (See above.)

Bismuthi Subnitras. Sir H. MARSH states (*Medical Press*, March 6th, 1867) that in chlorosis bismuth is an excellent substitute for iron, when the latter is not well borne.

1. The first of the two main groups of the population is the population of the urban centers. This group is characterized by a high level of education, a high level of income, and a high level of social status. The second group is the population of the rural areas. This group is characterized by a lower level of education, a lower level of income, and a lower level of social status. The third group is the population of the intermediate areas. This group is characterized by a moderate level of education, a moderate level of income, and a moderate level of social status. The fourth group is the population of the peripheral areas. This group is characterized by a low level of education, a low level of income, and a low level of social status. The fifth group is the population of the extreme areas. This group is characterized by a very low level of education, a very low level of income, and a very low level of social status. The sixth group is the population of the extreme areas. This group is characterized by a very low level of education, a very low level of income, and a very low level of social status. The seventh group is the population of the extreme areas. This group is characterized by a very low level of education, a very low level of income, and a very low level of social status. The eighth group is the population of the extreme areas. This group is characterized by a very low level of education, a very low level of income, and a very low level of social status. The ninth group is the population of the extreme areas. This group is characterized by a very low level of education, a very low level of income, and a very low level of social status. The tenth group is the population of the extreme areas. This group is characterized by a very low level of education, a very low level of income, and a very low level of social status.

morning, and oil of turpentine or tincture of cantharides may be exhibited internally, while the necessity of more active exercise is inculcated. If these means fail, they must for the moment be laid aside, and the constitutional treatment must be again resumed, until the same number of days before the next period, when the list of remedies above spoken of must be again tried, and in few cases indeed shall we find them to fail.

DR. PINTSCHOVIVS. OF KETZIN.

948. R. Extracti pulsatillæ,
Folia pulsatillæ, ʒā q. s. M.
Divide into pills of three grains each; one three times a day.

J. M. DA COSTA, M. D., PHILADELPHIA.

949. R. Apol, gr. iv. M.

In the form of a granule, or "pearl," four times a day, as an emmenagogue. To be taken for three days before the expected period. Apiol is an excellent remedy for amenorrhœa when there is no uterine disease.

DR. EMIL DILLENBERGER, VIENNA.

Treatment demands the removal of those errors and lesions which lie at the bottom of the malady. If the amenorrhœa consists of some anomaly of the sexual organs, congenital or acquired, and such as cannot be remedied, or in some other irremediable malady, treatment is useless. If menstruation has been already established, the physician must convince himself, by a careful examination, whether or not pregnancy is the cause of the cessation of the periods. Internally are used aloes and myrrh, as follows:—

950. R. Pulveris aloës, gr.lxviij
Pulveris myrrhæ, gr.xxxiv.
Extracti glycyrrhizæ, q. s. M.

For sixty pills. Two to four pills two to three times a day.

951. R.	Pulveris aloës socotrinae,			
	Pulveris myrrhæ,	aa	gr.xlviii	
	Croci sativi,		gr.xxxiv	
	Extracti glycyrrhizæ,		q. s.	M.
For ninety pills. From four to six twice a day.				

Or, savine, as follows:—

952. R. Pulveris frondis sabinæ,
Sacchari albi, aa gr. xxxiv
Olei menthæ piperitæ, gtt. iij. M.

Divide into six powders. One to be taken three times a day.

and the congestion is followed by a return of the menses, and consequently by a marked alleviation.

Injectations of warm water act like the cataplasm and warm lotions, which are so usefully employed in inflammation of the integument.

The injections of warm water are practiced at the hospital with irrigators, of which the jet is not very strong. The water used should be of 95° to 104° Fah., and it is renewed two, four or six times in the day. This therapeutic means is convenient and not repugnant to the patient.

DR. LISFRANC, PARIS.

- | | | | |
|---------|-----------------|------------|----|
| 975. R. | Vini opii, | gtt.x-xx | |
| | Camphoræ, | gr.ij-ivss | |
| | Decocti althæa, | f.℥ijss | |
| | Yolk of egg, | ℥ijss. | M. |

For an enema, to be given nearly cold, at bedtime, to relieve the pain of menstruation. Hot fomentations on the abdomen.

- | | | | |
|---------|---------------------|---------|----|
| 976. R. | Assafoetidæ, | ℥j | |
| | Vini opii, | ℥xv | |
| | Extracti valerianæ, | ℥ss | |
| | Decocti althæa, | f.℥ijss | |
| | Yolk of egg, | ℥v. | M. |

An enema, in hysterical dysmenorrhœa.

RÉSUMÉ OF REMEDIES.

Apiol, in the hands of Dr. TILT, of London, acts like a charm when given in doses of four grains, so soon as the pains of dysmenorrhœa begin. It is of little use, however, when the dysmenorrhœa depends upon disease of the uterus.

**Belladonna*. In neuralgic dysmenorrhœa, Dr. ANSTIE, of London, recommends (*British Medical Journal*, August 22d, 1868) the extract, as a palliative, in doses of gr.℥. He obtained still better results from the hypodermic injection of the sulphate of atropia, in doses of gr.℥-℥, twice a day, and continued for several weeks, at once reducing the quantity when marked dryness of the throat appeared. In constitutions very intolerant of belladonna in any form, the acetate of morphia may be advantageously substituted for the atropia. A belladonna plaster to the sacrum is often of benefit; so also is a suppository of extract of belladonna.

Camphor. Dr. DEWEES regards camphor as a very certain and uniform palliative, in doses of gr.x, every one or two hours, until relief be obtained. Or the following injection may be given:—

- | | | | |
|---------|----------------|-------|----|
| 977. R. | Camphoræ, | ℥ss-j | |
| | Tincturæ opii, | f.℥j | |
| | Mucilaginis, | | M. |

For an enema.

Camphor liniment, or ointment, well rubbed into the loins, also affords relief.

nabis Indica is sometimes a useful remedy.

Aicum is useful in dysmenorrhœa connected with a tendency to gout or rheumatism. It should be given with blue pill every other night; flannel at the same time should be worn, and exposure to cold avoided.

Chloridi Tinctura and *Ferri Vinum* are both excellent preparations in atonic dysmenorrhœa. Sir CHARLES LOCOCK recommends the following formula:—

978. R. Vini ferri,
Spiritus ætheris sulphuri
compositi, ss f.3j
Misturæ camphoræ, f.3vj. M.

Take one-fourth part every six hours.

iacum is often productive of the greatest benefit. The *tinctura guaiaci ammoniata* is especially serviceable.

ium. Opiates are often best exhibited in the form of enemata. Dr. E. J. TILT, of London, recommends a hot linseed-meal poultice, sprinkled with laudanum, to be applied to the hypogastrium. A single hypodermic injection of morphia, when the pain is habitually severe, will often be sufficient at each menstrual period.

siti Nitras has been found highly serviceable, in doses of gr.xv-xxx, well diluted with barley water.

pis. Dr. ASHWELL recommends the mustard hip-bath, to be repeated three or four times a day, the patient remaining in it for from thirty to sixty minutes, or even, if the pain be very severe, until faintness is induced.

e Biboras is of advantage combined with extract of belladonna.

monium is said to be of marked benefit in the severe forms of the disease.

zatum. A half teaspoonful of the extract in a little warm milk, every night, proves useful, by keeping up a healthy action of the liver and skin.

tria. Mild veratria ointment, rubbed over the hypogastric region twice a day, greatly relieves the pain.

MAMMARY DISEASES.

n acute mammitis, a number of observers have reported success with the *poke root*:—

979. R. Fluidi extracti phytolacæ, q. s.
Twenty drops every three hours.

Others have seen benefit from—

980. R. Tincturæ belladonnæ,
Tincturæ digitalis, ss f.3j. .M
Ten drops every three or four hours.

In *chronic mammitis*, Prof. HUNTER McGUIRE, M. D., of Richmond, Va., condemns (*Virginia Medical Monthly*, September, 1877) the severe and needless practice of slitting up the sinuses, or of injecting them with stimulating fluids. Nearly every case can be cured by *proper bandaging* with adhesive plaster.

Cut the plaster into strips from four to six inches in length, and from a half to three-quarters of an inch in width, according to the size of the breast. After warming the plaster, apply one end of a strip to the circumference of the gland, near the axilla. Take another strip of the same length and width, and fasten its end to the inner circumference of the breast, near the external bone. The ends of the two strips of plaster thus applied are held in place by an assistant, while the surgeon takes the free extremities of the strips, and drawing them toward each other, that is, drawing the breast from its circumference toward its centre, crosses the strips and fastens them. Two more strips are then applied just below, and lapping slightly the first two pieces. Continue in this way till the whole breast is covered (somewhat upon the same principle and manner that we use strips in an indolent sore on the leg), leaving the nipple and fistulous orifices uncovered. A piece of moistened lint is placed over the sinuses, to catch the pus which escapes.

DR. ASHBURTON THOMPSON, LONDON.

Speaking of mammitis, this writer (*Medical Times and Gazette*, January, 1875) mentions two modes of treatment, the administration of tincture of aconite, and the total abstention from fluids during the necessary number of days. By giving minim doses of aconite every hour, he had succeeded in cutting short inflammations of the breast which there was no doubt would otherwise have run on to suppuration very frequently; indeed, in three cases out of four. In cases of still-birth, he had hitherto found abstention from fluids sufficient in every case to avoid every kind of mammary distention. Ice was allowed in moderate quantity, and no other fluids from the time of delivery until the fourth or fifth day, when the breasts generally return to their normal state of quiescence. The deprivation of fluid caused but little distress.

MR. ROBERT DRUITT, LONDON.

981. R. Acidi tannici, gr. iv
Aque destillatæ, f3vj.

This solution, as well as ointments and glycerites of tannin, are used in cracked nipples. It should be applied on lint covered with silk.

DR. BLACQUIÈRES, FRANCE.

982. R. Extracti krameris, gr. xv
 Olei amygdalæ dulcis, f. ʒss
 Butyri coccoæ, ʒijss. M.
 To be applied to *cracked nipples* when the child has ceased to nurse;
 to be removed before nursing.

983. R. Zinci oxidi, aa gr. iss
 Sodæ boratis, aa f. ʒiss
 Olei amygdalæ dulcis, Div
 Butyri coccoæ, gtt. v. M.
 Olei bergamii,
 A useful liniment for cracked and chapped nipples.

GERMAN HOSPITAL, PHILADELPHIA.

984. R. Extracti opii, gr. iss
 Liquoris calcis, f. ʒv
 Olei amygdalæ dulcis, f. ʒij.
 Dissolve the extract of opium in the lime-water, add the oil, and shake
 vigorously.

MR. ERASMUS WILSON, LONDON.

The mucilage of acacia is a useful application to sore nipples. It should be penciled on the part immediately after suckling, and the nipple then be protected by a leaden shield. Or the following powder may be applied:—

985. R. Acaciæ gummi pulveris, aa ʒss. M.
 Sodæ biboratis,

DR. HUEBNER, DRESDEN, SAXONY.

The treatment pursued by this obstetrician in all lesions of the nipple and areola consists in the constant application, day and night, of lukewarm compresses, wet with lead-water; fissures, ulcers, and excoriations being touched once or twice a day with balsam of Peru, and the breast well supported. The child should nurse less often than usual, and, where possible, through a nipple-shield. He recommends the warm lead-water in mastitis also, to be followed by strapping of the breast and free incision, while supuration is promoted by poulticing.

MENORRHAGIA.

DR. RACIBORSKI, PARIS.

986. R. Ferri redacti, ℥j
 Extracti nucis vomicæ, gr. xij
 Mucilaginis acaciæ, q. s. M.
 Divide into sixty pills. From two to four morning and evening, for chlorotic young girls whose menstruation is too profuse.

DR. EMIL DILLENBERGER, VIENNA.

The treatment of the Vienna school comprises rest, horizontal position with the pelvis elevated, low diet, and cooling drinks, such as:—

987. R. Acidi tartarici, gr. x-xxij
 Syrupi aurantii floris, f. ʒvj
 Aquæ, f. ʒxv. M.
 For drinking.
988. R. Tamarindi, ℥j
 Fiat decoctum libræ unius.
 (Acidi sulphurici aromatici, f. ʒj-ij)
 Syrupi rubri, f. ʒss-j. M.
 For drinking.
989. R. Acidi sulphurici aromatici, f. ʒij
 Syrupi rubri, f. ʒj. M.
 One to two teaspoonfuls in a glass of water as a drink.

These directions and prescriptions, together with pure air, only moderately warmed, in the room, are some of the most important points which alone will often restrain rather free bleeding.

When there is *passive hemorrhage*, use cold dressings, injections of cold water, or the following astringents:—

990. R. Aluminis, ʒij-ivss
 Aquæ, f. ʒxv. M.
 For vaginal injections.
991. R. Acidi tannici, ʒss-iv
 Aquæ, f. ʒxv. M.
 For vaginal injections.
992. R. Zinci sulphatis, gr. x-xxxiv
 Aquæ, Oj. M.
 For vaginal injections.
993. R. Catechu, ʒij
 Aquæ, f. ʒxv. M.
 For vaginal injections.

994. R. Extracti krameriae, ʒij
Aque, f.ʒxv. M.
For vaginal injections.

Plugging the vagina is also an effectual remedy.

Among internal remedies, those that have generally shown themselves the best are :—

995. R. Ferri chloridi, gr.xvj
Tincturæ opii, gtt.x
Syrupi tolutani, f.ʒij
Aque, f.ʒvj. M.

A tablespoonful every one to two hours.

996. R. Pulveris ergotæ, aa gr.xxxiv
Sacchari albi, gtt.j. M.
Olei cinnamomi,

Divide into six doses. One powder every five minutes.

997. R. Extracti ergotæ fluidi, mxx-xl
Syrupi acaciæ, f.ʒij
Syrupi auranti floris, f.ʒss
Aque, f.ʒiij. M.

One tablespoonful four times a day.

998. R. Extracti krameriae, gr.vj-xx
Aluminis, aa gr.xxij
Sacchari albi, gtt.j. M.
Olei cinnamomi,

Divide into six powders. One powder every two to five hours.

999. R. Aluminis, gr.xxxij
Tincturæ cinnamomi, f.ʒij
Syrupi auranti corticis, f.ʒss
Aque cinnamomi, f.ʒiv. M.

One tablespoonful hourly.

Hemorrhage during pregnancy requires complete repose of body and mind, horizontal posture and acid drinks. The employment of other remedies depends on the answer to the question whether the physician can stay the bleeding without pregnancy being interrupted. In the negative case, cold applications on the abdomen, or injections, introduction of bits of ice into the vagina, or plugging the vagina, are proceedings to be recommended.

Bleeding which arises from the bursting of varicose vessels in the vagina requires to be treated with cold compression, plugging, ligature or transfixion of the bleeding vessels. The bleeding which occurs in mole pregnancies is stayed by the delivery of the moles.

the uterus cylinders of iodoform made according to the following formula :—

1006. R. Iodoformi,	3ijss	
Gum tragacanth,	gr.xv	
Mucilaginis,	q. s.	M.

Divide into cylinders No. x, each one and one-half inches in length.

One of these cylinders is to be carried completely into the cavity of the uterus, and a pledget of cotton introduced against the cervix, to retain it in position. Introduce one of these cylinders daily for five or six days previous to menstruation. The only objection to them is the excessively disagreeable odor which attends their use.

RÉSUMÉ OF REMEDIES.

Alumen often proves successful in controlling the hemorrhage. Dr. E. J. TILT, of London, says that in uterine hemorrhage alum, in solution with sulphuric acid, is the first remedy to try.

Argenti Oxidum is an efficient remedy in menorrhagia. More than three grains daily should not be given.

Arseniosum Acidum. Fowler's solution is said to check uterine hemorrhage, given at first in the dose of ℥x-xx, and repeated in ℥x doses every twenty minutes until the discharge ceases. This remedy must not, of course, be pushed too far.

**Cannabis Indica*. Dr. CHURCHILL, of Dublin, obtains from the tincture of Indian hemp, in doses of gtt.v-x, thrice daily, remarkable success in the treatment of menorrhagia and uterine hemorrhage.

Cimicifuga. Dr. RINGER, of London, says this remedy will certainly arrest menorrhagia, though he regards it as inferior in this affection to the bromide of potassium.

Digitalis is useful in menorrhagia and other forms of uterine hemorrhage, unconnected with organic disease. Dr. E. J. TILT, of London, employs the following :—

1007. R. Tincturæ digitalis,	f.3ij	
Acidi hydrocyanici diluti,	℥xxx	
Morphiæ acetatis,	gr.j	
Aquæ,	ad. f.3vj.	M.

A dessertspoonful every two or three hours.

Ergota, though not equally beneficial in all cases, is a useful remedy in menorrhagia. Dr. WARING-CURRAN states (*Medical Press*, November 17th, 1869) that it proves most useful in that form of menorrhagia which occurs in women of a scrofulous habit, who suffer from constipated debility, and in whom leucorrhœa exists as a consequence of previous hemorrhage. He gives freshly prepared infusion of ergot and borax in menorrhagia from obstructive cardiac disease, in that associated with a diseased portal system, in that consequent upon a scorbutic state of the system, and in genuine menorrhagia (i. e., an increase of the catamenia, continuing for a lengthened period, and returning before the proper period, without organic lesion). He finds it has little or no effect in menorrhagia dependent upon ulcer-

tion of the os, the presence of polypous growths or other tumors, or in that arising from retro-flexion of the uterus. Ergotin, subcutaneously, should not be neglected.

Ferri Chloridi Tinctura may frequently be given with advantage in atonic cases.

* *Gallicum Acidum* was much employed by the late Sir J. Y. SIMPSON, of Edinburgh, in atonic menorrhagia. He gave it in doses of gr.x, xv or xx daily, and continued its use during the intervals, as well as the period of discharge. Dr. E. J. TILT, of London, while testifying to its value as an astringent in many cases, finds that it often fails when the hemorrhage depends upon organic lesions.

Ipecacuanha, in full emetic doses, is often productive of the best results. Under the use of gr.xx of the powdered root, in the evening, followed by an acidulated draught in the morning, the discharge frequently ceases in twenty-four hours; if a relapse occurs, a repetition of the emetic seldom fails to make the cure permanent. Dr. TYLER SMITH thus explains its action in these cases: by its emetic power, it excites contraction of the abdominal muscles and compression of the uterus, which may, in turn, re-excite some amount of uterine reflex action; but beyond this, it appears to have a special action upon the uterus, increasing its contractile power beyond what could be imagined to occur from the merely secondary effects of vomiting. *Ipecacuanha* thus appears to influence the medulla oblongata and the lower medulla spinalis. This double action upon the extremities of the spinal centre is very extraordinary.

Krameria is particularly useful in menorrhagia occurring about the usual time of the cessation of the menses. Dr. DEWEES employed the following formula:—

1008.	R.	Extracti krameriae,	3ij	
		Pulveris rhei,	5ss	
		Syrupi,	q. s.	M.

Divide into forty pills, and order two thrice daily.

Magnesiæ Sulphas is recommended by Dr. GRAILY HEWITT, of London, who found a mixture containing very small doses of this salt, with a little dilute sulphuric acid and syrup, very useful during the time of the catamenial flow.

Matico. The pounded leaves, made into a paste and introduced into the vagina, are said to arrest the hemorrhage after the failure of a strong solution of nitrate of silver.

Plumbi Acetas often succeeds in severe cases, when given in enema:—

1009.	R.	Plumbi acetatis,	gr.xv-xx	
		Tincturæ opii,	℥xl	
		Mucilaginis,	f.3ij.	M.

For an enema.

In mild cases, the internal administration of sugar of lead and opium is usually successful.

* *Potassii Bromidum* is a favorite remedy of Dr. RINGER, of London, who lays down the following rules for its administration in menorrhagia:—If the loss of blood occurs only at the natural menstrual period, it will be sufficient to begin the medicine about a week before the discharge is expected, and when this has for a time ceased, it should be discontinued till the next attack is about to begin. If, on the other hand

the loss of blood occurs every fortnight, or oftener, it should be given without any intermission, till the disease is well controlled; and when the discharge has been brought to its right period and amount, a few doses should be given for a short time before each monthly period. It has less control over uterine hemorrhage due to tumor of the uterus than ergot and other remedies.

**Tannicum Acidum*, alone or combined with a small portion of dilute nitric acid, has often the happiest effects.

Zinci Sulphas, in doses of gr. j-ij, in pills, thrice daily, is often useful in the atonic forms of menorrhagia.

VAGINAL INJECTIONS.

Alumen. Dr. E. J. TILT, of London, orders, in purely atonic case of menorrhagia, the following vaginal injection:—

1010. R. *Aluminis*, ʒij
Decocti *quercus albæ*, Oj. M.

This injection is inadmissible if inflammatory symptoms are present.

Ferri Chloridi Tinctura, with equal parts of water, has been injected with success.

Galla. Decoction of galls (ʒij½, aquæ Oj), daily injected into the vagina, warm or cold, according to the feelings of the patient, is occasionally useful.

Quercus Alba. The decoction, with or without alum (ʒj, ad. decocti Oj), is a serviceable and safe vaginal injection.

OVARIAN DISEASE.

PROFESSOR J. MATTHEWS DUNCAN, EDINBURGH.

On the subject of *acute and chronic ovaritis*, this author states there is no specific treatment. In chronic cases, two, three or four leeches may be applied to the cervix uteri, through a speculum after the monthly periods. Croton oil liniment, or antimonial liniment, or a blister, may be applied to the inguinal canal adjacent to the affected gland. The bowels should be regulated by gentle saline laxatives. Leucorrhœa, if present, should not be actively treated, but by mild injections only. Mercury and iodide of potassium may be given in small doses.

J. WARING-CURRAN, L. K. AND Q. C. P. L., ETC.

For *ovarian neuralgia*:—

1011. R. *Ammoniaë muriatis*, ʒij
Tincturaë aconiti, f.ʒij
Syrupi aurantii corticis, f.ʒviij.

A teaspoonful thrice daily in the treatment of *ovarian neuralgia*.

Our author states that this combination has almost a magical influence in many cases. He reports (*Medical Press and Circular*, August 19th, 1868), six cases in which various sedatives and anodynes had been tried in vain. In all he found that before the above mixture was finished by the patient the pains had entirely ceased.

Dr. T. J. NEWMAN, of Chicago, confirms the usefulness of this mixture, and records (in the *Chicago Medical Examiner*, for November, 1869), three cases of neuralgia of the ovaries treated by it with success, after the failure of other remedies.

In the same painful complaint, Dr. R. BARTHOLOW has obtained excellent results from the following recipe:—

1012. R.	Extracti belladonnæ,	gr. iv	
	Extracti stramonii,	gr. v	
	Extracti hyoscyami,	gr. v	
	Quinise sulphatis,	ʒij.	M.

Make twenty pills. One three times a day in ovarian neuralgia and neuralgic dysmenorrhœa.

RÉSUMÉ OF REMEDIES.

Ammoniac Murias is often efficient in ovarian neuralgia.

Antimonii et Potassii Tartras. Counter-irritation by means of tartar emetic ointment is of service in subacute ovaritis. Dr. GRAILY HEWITT, of London, advises, together with this counter-irritation over the seat of the disease, the following internal treatment:—

1013. R.	Pulveris opii,	gr. v	
	Extracti cannabis indicæ,		
	Camphoræ,	ʒʒ	gr. x. M.

Divide into ten pills; one to be taken night and morning.

Atropia, hypodermically, $\frac{1}{15}$ — $\frac{1}{6}$ grain in ovarian neuralgia.

Camphoræ is very serviceable in ovarian pain.

Hydrargyri Unguentum. Dr. E. J. TILT, of London, recommends in subacute ovaritis—

1014. R.	Unguenti hydrargyri,	ʒij	
	Extracti belladonnæ,	ʒj	
	Ceræ,	ʒij	
	Adipis,	ʒj.	M.

Warm water enemas, and gentle aperients (castor oil), should accompany the treatment.

**Linum*. Large, light and soft linseed-meal poultices afford often the greatest relief in ovarian inflammation.

**Opium*. Pessaries of opium (gr. ij) frequently give the utmost relief in ovarian pain and irritation.

**Terebinthinae Oleum*. Hot turpentine epithems applied over the seat of the disease are very useful.

Blisters over the ovarian region are sometimes of service in subacute ovaritis.

Enema. Warm water enemas (simple or medicated), retained as long as possible, are of great benefit.

Ice, applied in a bag to the painful spot, is said by Dr. E. J. TILLY to relieve severe pain in acute ovaritis.

Leeches may often be applied to the groin or inside the thigh with good effect.

PRURITUS VULVÆ.

PROFESSOR T. GAILLARD THOMAS, NEW YORK.

This teacher believes that pruritus vulvæ is usually excited by an irritating leucorrhœal discharge in the lower part of the vagina (*American Journal of Obstetrics*, February, 1873). Cervical endometritis and abnormal growths, seat worms, the pediculus pubis and saccharine urine are other causes.

For the first-mentioned variety, Dr. A. R. JACKSON, of Chicago, has used, with gratifying results, the following:—

1015.	R.	Zinci sulpho-carbolatis,	℥ss	
		Aquæ,	f.℥viij.	M.

Wash the parts twice daily, leaving it to dry upon the surface.

PROFESSOR CARL SCHROEDER, ERLANGEN.

Of actual curative agents, this writer (*Ziemssen's Cyclopædia*) can only speak with confidence of—

1016.	R.	Acidi carbolici,	gtt. iv-l	
		Glycerinæ,		
		Aquæ,	ss	f.℥ss. M.

Apply locally.

He says of this combination:—"I am sure that whoever has once tried this will never return to any of the other remedies which have been recommended."

A. C. GARRATT, M. D., BOSTON.

1017.	R.	Acidi hydrocyanici (Scheele's),	f.℥ij	
		Liquoris plumbi subacetatis,	f.℥iv	
		Aquæ,	f.℥iiij.	M.

As a local application.

Dr. HORATIO R. STORER states that he has long given great comfort in this affection by Oldham's ointment of hydrocyanic acid and acetate of lead, with cocoa butter.

Dr. G. S. JONES, of Boston, has employed with benefit, in pruritus of the vulva, the following:—

1018. R.	Sodæ biboratis,	℥j	
	Camphoræ,	℥j	
	Olei gaultheriæ,	gtt. xxx	
	Aquæ bullientis,	℥ij.	M.

When cool, pass through a cloth. To be used cold, as a wash for the parts, and as an injection into the vagina.

RÉSUMÉ OF REMEDIES.

LOCAL APPLICATIONS.

Ammonii Murias, in the following ointment, is useful :—

1019. R.	Ammonii muriatis,	℥j	
	Pulveris helleboris albæ,	℥ss	
	Adipis,	℥ij.	M.

Ammoniæ Aquæ sometimes succeeds in obstinate cases like a charm, when injected in diluted form into the vagina :—

1020. R.	Ammoniæ aquæ,	f. ℥ss-j	
	Aquæ,	Oss.	M.

To be freely injected into the vagina.

Argenti Nitras. Dr. GRAILY HEWITT, of London, states that in obstinate cases a rather strong cauterization of the os uteri, with the solid nitrate, will sometimes succeed when other measures fail.

Calcis Aqua, applied warm, together with perfect rest and light clothing, will sometimes afford the desired relief.

Camphor, in powder, with starch, dusted over the parts, sometimes removes the distressing symptoms.

* *Chloral*, by Prof. J. R. BLACK, of Ohio :—

1021. R.	Chloral hydratis,	℥ij	
	Aquæ,	℥iv.	M.

Apply locally.

* *Chloroformum*. Dr. GRAILY HEWITT, of London, obtains the greatest benefit from the application of—

1022. R.	Chloroformi,	f. ℥ss	
	Olei amygdalæ expressi,	f. ℥ij.	M.

Creasotum. A weak solution is sometimes useful.

Hydrargyri Oxidi Rubri Unguentum, well diluted with cod-liver oil, is frequently an effectual application.

has been employed. After the first application the discharge is sometimes increased, but after the second or third it is generally greatly diminished, and a single application is often sufficient to cure superficial erosions of the cervix. As a rule, there is no difficulty in passing the probes, as in true uterine catarrh the os is invariably patulous.

DR. F. A. GALLOIS, PARIS.

1030. R.	Morphiæ muriatis,	3j-ij
	Sacchari,	gr. iv
	Ceræ albæ,	3j
	Butyri cacao,	3ss.

Melt over a slow fire the cocoa butter and the wax, incorporate the sugar and morphia, carefully triturated together, and when the mixture is on the point of forming a mass run it into four horns of paper, and allow it to cool.

These vaginal suppositories are useful in painful affections of the uterus, rectum and bladder.

DR. ROBERTS, MANCHESTER, ENGLAND.

In *ulcerations of the os*, this writer, while commending the carbolic application, does not consider the strong acid necessary in superficial ulceration. A mixture of one part of the strong acid with two of olive oil seems to answer all ordinary purposes; but in cases of very deep ulceration the use of the strong acid may be called for. In such cases, Dr. ROBERTS desires the acid to be liquefied by the addition of a very small quantity of water. This has not been found always to answer the purpose, but it has been noted that the addition of a *few grains of camphor* will dissolve the acid, and will, moreover, prevent it again becoming solidified, even at a freezing temperature. The application of the carbolic oil to the os uteri is best effected by soaking a little cotton-wool in the liquid, securing it by a string, and introducing it through a speculum, the string being left depending out of the vagina, and the patient being directed to pull it away on the second day. This procedure is repeated in ordinary cases about twice every week. If it be desired to apply the acid to the cervical canal, it may readily be done by passing in a gum-elastic catheter smeared with the carbolic oil.

INTRA-UTERINE MEDICATION.

PROFESSOR CARL SCHROEDER, OF ERLANGEN.

As cautions in the use of intra-uterine injections, this author mentions:—

1. Tenderness or inflammation of the uterus or its appendages.
2. There must be a free exit of the injected fluid; hence it is better first to dilate, in every case, the uterine neck.
3. Only a small quantity of fluid must be injected.
4. The fluid should be slightly warmed, and slowly injected.
5. Where there is flexion of the uterus it is advisable to draw the fluid back into the syringe after a minute or two.

Of substances used, probably the solutions of alum and iodine are the most useful, as these do not form precipitates with the albumen of the discharge, as iron, acetate of lead, nitrate of silver, etc.

Dr. ROBERT BARNES remarks (*British Medical Journal*, January, 1873), that a most precious way of applying almost any medicinal agent to the interior of the uterus is in the form of an ointment or *pasma*. They can be introduced by means of a hollow sound, with a piston working in its centre, the "ointment positor." Where grease is objectionable, glycerine, cocoa butter, cosmoline, vaseline, etc., may be used. Thus bromine, iodine, mercury, etc., can be safely applied.

Dr. W. W. WILKENS recommends (*Transactions of the New Hampshire State Medical Society*, 1875) the following as admirably adapted to *chronic uterine catarrh*:—

1031. R.	Acidi carbolic,	3j	
	Aquæ,	f. 3ss	
Dissolve and add:—			
	Glycerinæ,	f. 3ss.	M.

This mixture will not cauterize or destroy tissue, but acts as a healthy stimulus. None or little pain follows its use. It should be applied to the entire mucous membrane of the womb about once in ten days.

THE MEDICAL TREATMENT OF UTERINE TUMORS.

Fibroid Tumors. From numerous sources, lately, the assertion has been made that interstitial fibroid tumor of the uterus can be

silver is liable to excite severe hemorrhages if applied to this form of erosion.

In simple ulcerations of the os much good often follows the use of *iodo-tannin*:—

1035. R. Iodinii, ʒj
Acidi tannici, f.ʒj
Aquæ, Oj. M.
Filter and evaporate to ʒiv. To be applied to the ulcerated surface.

Or, for extemporaneous use:—

1036. R. Tincturæ iodinii,
Tincturæ gallæ, ss f.ʒss. M.
For local use.

UTERINE ULCERATION.

DR. SAINT GERMAIN, PARIS.

1037. R. Acidi tannici, ʒiij
Glycerinæ, f.ʒiij. M.

Prepare little bags of gauze about an inch and a half long and a little larger than the thumb, fill them with dry linseed meal, and after having immersed them in the above solution introduce them into the vagina for the relief of the pain accompanying ulceration of the uterine neck. One is allowed to remain in place for several days and then remove; after free injection of the vagina, a new sachet is introduced.

When the pain is very acute, the above solution may be replaced by the following:—

1038. R. Extracti belladonnæ, ʒij
Glycerinæ, ʒiij. M.
To be applied as above.

CANCER OF THE UTERUS.

1039. R. Acidi sulphurici, f.ʒijss
Aquæ destillatæ, f.ʒxv. M.

The patient being recumbent on the back, with the pelvis elevated, a glass speculum is introduced and a teaspoonful of this acid solution is introduced in contact with the cancerous ulceration, and retained there for five or six minutes, after which it is replaced by simple water. This operation is to be repeated twice a day. It is alleged that under the influence of this treatment the hemorrhages are more rare and less grave, and that the progress of the cancer is retarded.

AGINITIS—VAGINAL CATARRH—LEUCORRHOEA.

DR. T. FINCH, OF ILLINOIS.

1045. R. Potassæ chloratis, ʒiv
 Potassæ permanganatis, gr. x
 Aquæ, Oj. M.

Inject a teacupful morning and evening, in acute vaginitis. Warm sitz-baths and saline laxatives are important accessories (*Chicago Medical Examiner*, December, 1874).

DR. J. N. DEMARQUAY, PARIS.

1046. R. Acidi tannici, gr. xv-xxx
 Glycerinæ, f.ʒijss. M.

Tampons of wadding immersed in this solution are introduced into the vagina after the acute symptoms have been relieved by baths, emollient injections and repose.

M. MAISSONNEUVE, PARIS.

1047. R. Ferri sulphatis, ʒijss
 Aquæ, Oj. M.

This solution is advised in injections in vaginitis. After each injection a certain quantity of starch is to be introduced into the vagina.

DR. EDMOND LANGLEBERT, PARIS.

1048. R. Tincturæ iodinii, f.ʒv-x
 Aquæ destillatæ, Oij
 Potassii iodidi, q. s. to prevent the precipitation of the iodine. M.

A useful injection in vaginitis after the acute stage has passed. Irritation, if any exist, should be lightly touched with nitrate of silver. If the vaginal discharge be offensive, the following injection is useful:—

1049. R. Liquoris sodæ chlorinatæ, f.ʒvj
 Aquæ destillatæ, Oiss. M.

DR. A. A. BOINET, PARIS.

1050. R. Tincturæ iodinii, f ʒiij
 Acidi tannici, ʒj
 Potassii iodidi, ʒss. M.

This solution is employed to paint the vagina, in acute or chronic vaginitis, and the uterine neck, in engorgement and ulceration. The proportion of the tincture of iodine is to be lessened according to the character of the inflamed tissues and the effect that it is desired to produce.

asarides. The use of the tincture, once so highly praised by Dr. DEWEES and others, has fallen into comparative disuse. It was given in gtt. xx thrice daily, in a demulcent draught, the dose being subsequently increased to gtt.xl-l, until it produced slight strangury, when it was diminished or the medicine discontinued. The average period of cure was about four months.

saiba is highly spoken of by a number of writers, in doses of ℥xv thrice daily.

beds have been employed with success.

ret, in doses of gr.v thrice daily, often gives good results, especially if a blister be applied to the sacrum.

las Pulvis, in doses of gr.x-xx, in decoction of tormentilla, daily, is given with great benefit at the Lock Hospital, London.

matocxyli Lignum, in decoction, has been employed with advantage.

iperus frequently exerts a beneficial influence.

meria. The extract, in doses of gr.xx daily, often arrests the discharge and improves the tone of the system.

assii Nitras. Dr. DEWEES prescribed the following with success in some obstinate cases :—

1055. R.	Potassii nitratis,	3v	
	Aluminis,	℥ijss.	M.

Divide into thirty powders; one thrice daily.

micum Acidum, in doses of gr.ij-ij twice or thrice daily, in aqueous solution, combined with a small portion of dilute nitric acid, has been found an efficacious remedy.

ebnikinæ Oleum is recommended, in small and repeated doses, by Dr. PERRIRA, in chronic cases, unattended by inflammatory symptoms.

VAGINAL INJECTIONS.

lumen. Dr. TYLER SMITH, of London, has found the following injection very serviceable :—

1056. R.	Aluminis,	℥ss	
	Acidi tannici,	℥j-ij	
	Aquæ,	Oij.	M.

One-half to be used at night, and the other half in the morning.

Oak-bark decoction also makes a good vehicle :—

1057. R.	Aluminis,	℥j	
	Decocti quercus albæ,	Oj.	M.

Dr. E. J. TILT, of London, remarks that he has repeatedly known the prolonged use of alum injections produce an irritable, sub-inflammatory state of the cervix uteri; he advises, therefore, when astringent injections are long continued, to use those of alum, zinc and sugar of lead, on alternate days.

monii Murias has occasionally been used in vaginal injections :—

1058. R.	Ammonii muriatis,	℥j-iv	
	Aquæ,	Oj.	M.

Argenti Nitras, in solution, has been advised as a vaginal injection :—

1059. R. Argenti nitratis, gr. iij
Aque destillatæ, f. ʒj. M.

Calcis Aqua. The vaginal injection of a weak solution of lime-water sometimes effects a cure after the failure of other remedies.

Catechu. The infusion, injected once or twice a day, often greatly lessens the discharge.

Cupri Sulphas. The following injection, given after previously washing out the vagina with soap and water, is of service :—

1060. R. Cupri sulphatis, gr. xx-xxx
Aque tepidæ, Oss. M.
To be used thrice daily.

Hydrargyri Chloridum Corrosivum. Dr. DEWEES employed the following solution as a vaginal injection :—

1061. R. Hydrargyri chloridi corrosivi, gr. ij
Aque, f. ʒj. M.

To be used only in chronic cases; given at first only once a day, then several times a day, until heat and irritation occur, when lotions of acetate of lead will effect the cure.

Matico. The infusion has been injected with benefit.

Plumbi Acetas. The following are useful vaginal injections :—

1062. R. Plumbi acetatis, gr. vj
Aque, f. ʒj. M.

1063. R. Liquoris plumbi subacetatis, f. ʒij
Aque, Oj. M.

Potassii Chloras. The following vaginal injection has been employed with success :—

1064. R. Potassii chloratis, ʒj
Aque destillatæ, f. ʒ viij. M.

Granati Radicis Cortex. The decoction of the root-bark (ʒij, aque Oij, boiled to Oj) is a useful vaginal injection, combined with alum :—

1065. R. Aluminis, ʒj
Decocti granati radicis cortici, Oj. M.

Quercus Alba. The decoction, with or without alum, is a safe and effective vaginal injection.

Sodii Boras. Dr. GRAILY HEWITT, of London, advises, when the discharge is acrid, frequent ablutions of the external parts with a borax lotion, to prevent irritation.

Tormentilla. The decoction (ʒij, aque Oss, boiled to Oj) is an excellent vehicle for alum, in vaginal injection.

**Zinci Acetas*. This salt forms a useful vaginal injection, in the strength of

gr.ij-iv to aquæ f.℥j. The following was a favorite formula with Sir ASTLEY COOPER :—

1066. R.	Zinci sulphatis,	gr.vj	
	Liquoris plumbi subacetatis,	℥xxx	
	Aquæ,	f.℥iv.	M.

By this formula decomposition takes place, the acetate of zinc resulting.

ici Oxidum. The following vaginal injection has been given with success :—

1067. R.	Zinci oxidi,	℥ss	
	Aquæ,	Oij.	M.

The sulphate of zinc, gr.j to water f.℥j, is also excellent.

VOMITING OF PREGNANCY.

DR. ALBERT EULENBERG, BERLIN.

1068. R.	Tincturæ iodinii,	℥xv	
	Alcoholis,	f.℥iij.	M.

Give three drops several times a day, in a tablespoonful of an aromatic infusion.

1069. R.	Tincturæ iodinii,	gtt.x	
	Aquæ destillatæ,	f.℥iij	
	Syrupi aurantii corticis,	f.℥j.	M.

A teaspoonful, or even a tablespoonful.

Other approved prescriptions are :—

1070. R.	Bismuthi subnitratæ,	℥iij	
	Acidi carbolici,	gr.iv	
	Mucilaginis acaciæ,	f.℥j	
	Aquæ menthæ piperitæ,	f.℥iij.	M.

A tablespoonful three or four times a day.

1071. R.	Atropiæ sulphatis,	gr.ij	
	Aquæ destillatæ,	f.℥j.	M.

Two drops in water, before meals.

1072. R.	Cerii oxalatis,	gr.x	
	Bismuthi subnitratæ,	gr.xxx.	M.

Make ten powders. One five or six times a day.

1082. R. Syrupi ipecacuanhæ, f.ʒj.
 A teaspoonful every ten minutes until vomiting is produced; ~~to be~~ repeated every second day. For ordinary acute bronchitis in a ~~child~~ a year old. Together with :—

1083. R. Ammonise carbonatis, ʒss
 Syrupi senegæ, f.ʒss
 Syrupi tulutani, f.ʒj
 Aquæ, f.ʒjss. M.
 A teaspoonful thrice daily.

For Résumé of Remedies in Bronchitis, see *Diseases of the Respiratory Organs*, pp. 136, 146.

CHOLERA INFANTUM.

DR. IRVING C. ROSSE, U. S. A.

In a communication to the Surgeon-General's Office, this writer states that the *bromide of potassium* is almost a specific in this affection, careful attention to hygiene being observed. The following formula is used :—

1084. R. Potassii bromidi, ʒj-ij
 Mucilaginis acaciæ, f.ʒij. M.
 From ten drops to a teaspoonful, regulated according to circumstances.
 Occasionally, a drachm of krameria is added to this recipe.

The food is prepared by pounding a small quantity of fresh beef in a linen cloth, and expressing the juice, to which a very small seasoning of cayenne pepper is added. Minute quantities of brandy are administered when indicated.

PROF. N. S. DAVIS, M. D., CHICAGO.

In threatening cases this physician recommends—

1085. R. Acidi carbolici crystalisati, gr. iij
 Glycerinæ, f.ʒss
 Tincturæ opii camphoræ, f.ʒj
 Aquæ, f.ʒjss. M.
 Give twenty drops every half-hour, till the vomiting ceases; then every four hours.

1086. R. Hydrargyri chloridi mitis, gr. iv
 Pulveris opii, gr. j
 Sacchari albi, gr. xxx. M.
 Make eight powders. Give one every eight hours.

VIII. DISEASES OF CHILDREN.

General Remarks on Infantile Therapeutics—Anæmia—Bronchitis, Acute and Chronic, and Laryngitis—Cholera Infantum—Convulsions—Coryza—Croup, Membranous and Spasmodic—Diarrhæa—Diphtheria—Hydrocephalus, Acute and Chronic—Incontinence of Urine—Pertussis—Pneumonia, Infantile—Rachitis—Scarlatina—Stomatitis—Tonsillitis—Worms.

INFANTILE THERAPEUTICS.

EDWARD JOHN WARING, M. D., LONDON.

In childhood (as in old age) the same doses of medicines are not generally as well borne as in youth and manhood, and much nicety is sometimes necessary in regulating the dose. Several exceptions, however, present themselves; thus, in childhood (and in old age) much larger quantities of mercury are necessary to induce salivation than in manhood; indeed, Dr. CLARKE states that, in a practice of twenty years, he never saw a child truly salivated; an observation corroborated by the experience of others. Prof. GRAVES ascribes the difficulty of inducing salivation in children and in old persons to the undeveloped state of the salivary glands in the former, and to their atrophied state in the latter. On the other hand, in infancy and childhood, *opium* in every form is a remedy that requires the utmost caution in its administration. Two and a half drops of laudanum have destroyed an infant three days old; three drops, a strong child of fourteen months; and four drops, a child of a few weeks old (CHRISTISON). In infancy and childhood, *blisters* allowed to remain long in contact with the skin are apt to induce ulceration and gangrene; and *leeches*, on account of the thinness of the skin, and the vascularity of the subjacent tissues, draw more blood, and, consequently, make a more decided impression on the system in an infant, than a proportionate number would produce in an adult.

[Prof. H. C. Wood, of Philadelphia, questions the great susceptibility of infants to opium. He has used that drug with great freedom in infantile therapeutics, and without injury.]

To this mixture an astringent may be added, as tincture of catechu or kino. It should be borne in mind, however, that astringents are less tolerated by an irritable stomach than opium or chalk. When they are vomited, therefore, they should be discontinued, even in cases in which they would doubtless be serviceable if the stomach were retentive.

By means of the opiate and astringents, if they be retained, the passages are rendered, in a few hours, less frequent, and the stools more consistent.

In cases in which calomel is employed our author does not recommend its use in larger doses than one-fourth of a grain, morning and evening (together with the astringent and opiate), to a child of one year.

Dr. S. also advises small pieces of ice in the mouth at the beginning of the attack, to combat the irritability of the stomach, and the application of mustard to the epigastrium.

In most cases Bourbon whisky or brandy, the best of the alcoholic stimulants, are required. They should be used from an early period of the disease, both for the purpose of sustaining the vital powers and of diminishing the gastric irritability.

The diet should be simple, but nutritious, and taken often, but little at a time. If the child be at the breast, it should be confined to the mother's milk. If it be weaned, cold barley or rice water, with whisky or brandy, should be given in the commencement of the attack; afterward, milk or broth may be employed in addition.

1089. R.	Creasoti,	gtt. j	
	Aquæ calcis,	f. ℥ ij.	M.

One teaspoonful with a teaspoonful of milk, breast milk if the infant nurses, repeated *pro re natâ*, for the vomiting so frequent in the summer epidemics of intestinal inflammation in the cities.

This recipe is much used in the Nursery and Child's Hospital of New York city. Or, the following may be administered:—

1090. R.	Potassæ bicarbonatis,	gr. xxv	
	Acidi citrici,	gr. xvij	
	Aquæ amygdalæ amaræ,	f. ℥ j	
	Aquæ,	f. ℥ ij.	M.

Teaspoonful, repeated *pro re natâ*.

MEREDITH CLYMER, M. D., NEW YORK.

This author gives the following indications for the treatment of *cholera infantum* :—

The instantly threatening symptoms, purging and vomiting, are to be stopped. Fermentation, and not chymification, is going on in the stomach and duodenum. Hence, small doses of the *bisulphites of soda or potassa*, with limed whey, will often act very happily, while the effect of poisonous drugs is always doubtful, and generally positively harmful. *Mercury* is, at best, negative. *Opium* and its preparations will be found valuable, if not contra-indicated by cerebral epiphenomena. The effects should be carefully watched. Flannel, wrung out of hot water, and on which laudanum is poured, applied to the spine, will be found useful in checking vomiting. The function of the skin, which, in common with all the excreting organs, is inactive, must be excited. This may be done by gentle friction with woollen cloths, or a warm alkaline bath, in which the little patient should not remain longer than three minutes, being then quickly dried and wrapped in flannel. Food, of proper quality and quantity, should be given as soon as the stomach and bowels will tolerate it. Farinaceous articles are entirely inappropriate. Limed milk, to which a little gelatine has been added, or rennet whey, may be given; but in protracted cases, attended with great prostration and rapid emaciation, the *raw meat diet*, prepared as recommended by Prof. TROUSSEAU, will be often seized with avidity and well borne. Lean beef or mutton is first finely hashed, pounded in a mortar to a pulp, and then passed through a fine sieve. The thick concentrated juice thus obtained is nutritious and digestible, and, when salted or otherwise flavored, quite acceptable. Give a half to three-quarters of an ounce, in fractional doses, the first day. If well borne by the stomach, increase the quantity day by day, until a quarter or half a pound is taken in the course of the twenty-four hours. For the first day or two, much of it may pass, hardly changed, from the bowels; but this alone should not occasion its discontinuance. If too long continued, however, this diet is liable to generate *tænia*. White of eggs, thinned with natural or artificial Seltzer, Vichy, or weak lime water, is an excellent drink, to which a few grains of bicarbonate of soda may be added. Tonics and stimulants are often required. Of the former, minute doses of *arsenic*, alone, or combined with quinine, or the chloride of iron, or the pernitrate of iron, or the

CORYZA.

PROF. J. LEWIS SMITH, M. D., NEW YORK.

In children, ordinary attacks of this affection require little treatment beyond keeping the bowels open, soaking the feet in mustard water, and having the body warmly clothed. Friction with camphorated oil over the nose is of some benefit. In attacks which commence with greater severity, an emetic of syrup of ipecacuanha, given early, will moderate the inflammation, and may prevent the occurrence of bronchitis. Afterward, a simple diaphoretic mixture should be administered, such as the following :—

1094. R. Syrupi ipecacuanhæ, f.ʒij
Spiritus ætheris nitrosi, f.ʒj
Syrupi simplicis, f.ʒij. M.
One teaspoonful every three hours to a child of six months.

In place of sweet spirits of nitre, *acetate of potash* may be employed, in the dose of one to two grains for infants. If there is febrile reaction, from half a minim to two minims, according to the age, of *tincture of digitalis* may be given in each dose.

In pseudo-membranous coryza the laryngitis which usually accompanies this affection demands the first attention. The injection of a solution of chlorate of potash, in water, several times a day, subdues the inflammation and removes the collection of mucus and pus. Or the following may be employed :—

1095. R. Pulveris aluminis, gr. xvj-xx
Aque, f.ʒiv. M.
The bromine solution (F. 1115), diluted as directed, will also be found useful when injected into the nostrils.

Chronic coryza should be treated by tonics and by alteratives, directed to the cachexia which may be present. Together with such constitutional treatment, a solution of nitrate of silver (gr. iij-v to f.ʒj), may be injected into the nostrils. An excellent formula for application to parts which can be reached by a camel's-hair pencil is—

1096. R. Pulveris zinci oxidi, ʒi
Glycerinæ, f.ʒj. M.
To be applied three or four times a day.

C. WEST, M. D.

1097. R. Liquoris ammoniæ acetatis, f.3j ^{7/8}
 Vini ipecacuanhæ, ℥xvj ²
 Potassæ nitratis, gr.vij ¹
 Misturæ amygdalæ, f.3vj. M.

A teaspoonful every four hours for a child of six months.

DR. P. GUERSANT, OF PARIS.

In chronic coryza, with irritating secretions, this author recommends the following:—

1098. R. Hydrargyri ammoniati, ℥iss
 Pulveris althæa, ʒj. M.
 Use as a snuff.

CROUP, MEMBRANOUS AND SPASMODIC.

PROF. FORDYCE BARKER, M. D., OF NEW YORK CITY.

This teacher always commences treatment by the following emetic of turpeth mineral:—

1099. R. Hydrargyri sulphatis flavæ, gr.ijj-v.
 For one dose. If it does not act in fifteen minutes, give a second dose of three to five grains, according to the age of the child. This, however, is rarely necessary.

He prefers this to all other emetics in croup.

If on the next visit he finds the child with a quick pulse, hot skin, somewhat hurried breathing, and an occasional ringing cough, but with no thoracic râles, he directs that it shall be kept quiet in bed, comfortably covered, but not with too many clothes, and prescribes the veratrum viride, in one or two drop doses, according to the age of the child, as, for example, in the following formula:—

1100. R. Tincturæ veratri viridis, gtt.xvj-xxx
 Spiritus ætheris nitrosi, f.ʒij
 Syrupi simplicis, f.ʒj
 Aquæ, f.ʒvj. M.

A tablespoonful every second hour.

He visits the child at least as often as every eighth hour, and increases or diminishes the dose, according to the effect of the medicine on the pulse. He is not satisfied until the pulse is below

water on unslaked lime in a pitcher, and to have the patient inhale the vapor as it arises.

1104. R. Acidi tannici, gr.ij-xx
 Aquæ, f.℥j. M.
 For one inhalation, to last fifteen to twenty minutes.
1105. R. Potassii bromidi, gr.v-x
 Aquæ, f.℥j. M.

This inhalation, at the early stage of the disease, will often be found to arrest the symptoms.

With these inhalations the administration of emetics or other remedies may and must be combined, if considered necessary.

MEREDITH CLYMER, M. D., ETC., NEW YORK.

Blood-letting, either general or local, is generally harmful in the treatment of croup. The safest and best emetic is the sulphate of copper, in half or one-grain doses, every fifteen minutes, till the vomiting occurs. Afterward give the following:—

1106. R. Potassæ chloratis, ℥ij
 Potassii iodidi, gr.viii
 Tincturæ opii camphoratæ, ℥xl
 Liquoris potassæ, ℥xij
 Aquæ, f.℥ij. M.
 A dessertspoonful, in water, every second or third hour.

Brush the throat and upper part of the larynx with the following:—

1107. R. Tincturæ ferri chloridi, f.℥j
 Aquæ, f.℥ij. M.

Beef-tea, wine, quinine and iron are generally required.

DR. FELIX VON NIEMEYER, PROFESSOR UNIVERSITY OF TÜBINGEN.

1108. R. Cupri sulphatis, gr.x-xv
 Aquæ, f.℥ij. M.

A large teaspoonful to be taken every five minutes until vomiting sets in.

In regard to the employment of emetics in croup, Prof. N. thinks that *they are only indicated when obstructing croup-membranes play a part in producing the dyspnœa, and when the child's efforts at coughing are insufficient to expel them. Impeded expiration is an indication of their employment.*

Sulphate of copper is preferable to tartar-emetic or ipecacuanha.

It should be given in full doses; in small ones it is uncertain, and more apt to operate as a poison.

If the bowels be confined, administer a clyster, so that the diaphragm may have room to act. The best is a cold one, as follows:—

1109. R. Acidi acetici diluti, f.℥ij
Aquæ, f.℥vj. M.

If, however, there is no remission, notwithstanding the employment of the emetic and the cold application, apply the following concentrated solution, at intervals of several hours, to the entrance of the glottis:—

1110. R. Argenti nitratis, ʒss
Aquæ destillatæ, f.℥ij. M.

Dip a curved rod of whalebone, with a small sponge made fast to its lower end, into this solution, press down the tongue of the child, and endeavor to reach the entrance of the glottis with the sponge. There the sponge is immediately compressed by the muscular contraction which takes place, whereby certainly a portion of the liquid, if only a small one, arrives at the larynx. Administer also half a grain of calomel every two hours.

Should this treatment remain without effect, proceed at once to tracheotomy.

Besides treating the dyspnœa upon the principles given above, it may be necessary to relieve the paralytic symptoms due to blood-poisoning by carbonic acid. For this purpose the powerful stimulus obtained by pouring cold water upon the child while in a warm bath is of great service. Lose no time in making use of it, the moment the child begins to grow drowsy, the skin to cool, the sensorium to be benumbed, or as soon as emetics fail to act. A few gallons of cold water, poured from a moderate height, over the head, nape and back of the child, almost always cause it to revive for a while and to cough vigorously. Thus, sometimes, after the bath, masses of exudation are expelled. Other stimulants, such as camphor or musk, are much less effective, and ought not to be employed, save when insuperable objections are opposed to the cold effusion. They should be given in large doses, immediately prior to the emetic. The following formula may be used:—

1111. R. Camphoræ, gr. x
Ætheris acetici, f.℥ij. M.
Ten to fifteen drops to be given every quarter of an hour.

PROFESSOR J. LEWIS SMITH, M. D., ETC., NEW YORK.

- | | | | |
|----------|--------------------|--------|----|
| 1112. R. | Potassæ chloratis, | ʒi | |
| | Ammoniæ muriatis, | ʒij | |
| | Syrupi simplicis, | f.ʒj | |
| | Aquæ, | f.ʒij. | M. |

One teaspoonful every twenty minutes to half an hour, or in cases not severe every two hours. This should be continued regularly night and day until the cough becomes looser, or until it is evident, if the case be unfavorable, that it can be of no service.

The atmosphere the child breathes should be constantly loaded with moisture, without, however, that degree of heat which would add materially to the discomfort of the patient or attendants. The temperature should be of 75° or 80°.

Besides the nitrate of silver, three other substances have been used of late years for the topical treatment of the throat, which appear to be more effectual in removing the pseudo-membrane, and controlling the inflammation. One is *liquor ferri subsulphatis*; the second, *carbolic acid*, and the third, *bromine*. The following formulæ may be used:—

- | | | | |
|----------|------------------------------|--------|----|
| 1113. R. | Liquoris ferri subsulphatis, | f.ʒj | |
| | Glycerinæ, | f.ʒss. | M. |
| 1114. R. | Acidi carbolici fluidi, | f.ʒj | |
| | Aquæ, | f.ʒvj. | M. |
| 1115. R. | Brominii, | ʒij | |
| | Potassii bromidi, | gr.xlv | |
| | Aquæ, | f.ʒj. | M. |

This is called the bromine solution; but it must be considerably diluted for use. Twenty-four to forty drops should be added to an ounce of water for application to the fauces or larynx. Our author most highly recommends the sulphate of iron solution.

J. M. DA COSTA, M. D., PHILADELPHIA.

- | | | | |
|----------|----------------------------|--------|----|
| 1116. R. | Extracti hyoscyami fluidi, | ʒijj-x | |
| | Aquæ destillatæ, | f.ʒj. | M. |
- Used as an inhalation in spasmodic croup.

RÉSUMÉ OF REMEDIES.

**Acidum Lacticum*, as a solvent of false membrane in croup, is highly esteemed. The following is the formula of the London Throat Hospital:—

- | | | | |
|----------|------------------|-------|----|
| 1117. R. | Acidi lactici, | ʒss | |
| | Aquæ destillatæ, | f.ʒx. | M. |
- Use with an atomizer.

seemingly doomed to die, relieved in twelve hours by enforced cold bathing every three or four hours, will grant to Dr. COMEGYS the credit of having introduced one of the most life-saving improvements in modern infantile therapeutics."

When the diarrhoea is without febrile action—a wasting mucous discharge—the use of *ergotin*, or of the fluid extract of *ergot*, has been recommended, on the same authority, as of great efficiency.

DIPHTHERIA.

EDWARD ELLIS, M. D., LONDON.

The most important indication in the treatment of diphtheria in children is to support the strength in every way, the disease being of perhaps a more lowering character than any other with which we are acquainted; and the other indication is to control, and if possible prevent, the formation and spread of the false membrane. Three remedies have been especially commended in the general treatment of this disease: *chlorate of potash*, *muriatic acid* and the *muriatic tincture of iron*. Probably a combination, such as—

1128. R.	Potassii chloratis,	gr. x	
	Tincturæ ferri chloridi,	m. v	
	Syrupi aurantii,	f. 3ss	
	Aquæ,	f. 3ij.	M.

—for one dose—is the best. At the same time, beef-tea, soups, wine, and every form of light nutriment, may be given with advantage. Rennet whey and buttermilk are useful. The quantity of wine and brandy absolutely needed is sometimes very large, and indeed can hardly be overdone. When dysphagia renders swallowing impossible, *enemata* of port wine and beef-tea must be resorted to. In obstinate vomiting, which is so dangerous a symptom, *ice* may be sucked, while the strength is supported by the rectum; and if the sickness does not pass away, the hypodermic injection of a little morphia over the stomach may be tried. When albuminuria is a primary symptom, the muriatic tincture of iron may be omitted and iodide of potassium substituted; and the child should, when practicable, drink freely of barley-water and other diluents. Locally, a solution of nitrate of silver (ʒj to aquæ f. 3ss), or perhaps, better, of

chlorinated soda (liquoris sodæ chlorinatæ f.ʒss, aquæ f.ʒvj) may be applied by a camel-hair brush, or the latter solution may be syringed into the throat, as of course young children cannot gargle; or the muriatic tincture of iron may be applied locally, or the diluted muriatic acid or nitric acids, mixed with equal portions of glycerine.

Ice is always valuable, and may be freely sucked. The inhalation of iodine is also advocated. All attempts at bleeding, blistering, or indeed any form of counter-irritation, are worse than useless. The disease being contagious, the secretions and expectorations should be received in vessels containing chloride of lime; cleanliness should be scrupulously observed, and those in attendance should gargle their throats with a solution of chlorinated soda, or Condry's fluid, or carbolic acid. Strychnine is the tonic from the use of which much may be hoped in the prevention and cure of the subsequent paralysis, and galvanism is the most useful local agency in these cases. Change of air is also desirable in restoring the enfeebled heart and nerves.

DR. ROBERT BELL, OF GLASGOW, SCOTLAND.

1129. R. Acidi carbolici, f.ʒij
 Acidi sulphurosi, f.ʒvj
 Tincturæ ferri chloridi,
 Glycerinæ, aa f.ʒj. M.
 Apply to the throat with a large camel-hair pencil, or by means of the spray apparatus, every two hours.

Also,

1130. R. Potassæ chloratis, ʒiij
 Acidi sulphurosi, f.ʒiijss
 Tincturæ ferri chloridi, f.ʒiij
 Glycerinæ, f.ʒj
 Aquam, ad. f.ʒvj. M.
 A dessertspoonful every two hours.

With this medication must be combined free stimulation and plenty of nourishment, in the shape of soups, jellies and milk, from the very outset of the disease.

PROF. J. LEWIS SMITH, NEW YORK.

1131. R. Sodæ bisulphitis, ʒj-ij
 Tincturæ aurantii, f.ʒij
 Aquæ, f.ʒx. M.
 One teaspoonful every two hours. Sometimes, in place of water, a bitter infusion, like that of quassia, has been employed.

The sulphites have not been employed sufficiently to determine their value in this disease. Our author considers the following mixture one of the very best for ordinary cases of diphtheria:—

1132. R. Tincturæ ferri chloridi, f.ʒj
Potassæ chloratis, ʒi
Syrupi simplicis, f.ʒij.
One teaspoonful every two or three hours to a child of two or three years.

No drinks should be allowed the patient for a few minutes after each dose, in order that the full local effect may be obtained.

In those of full habit and florid complexion, iron is not so imperatively required. In such cases, use the following:—

1133. R. Elixir cinchonæ, f.ʒiv.
A teaspoonful to a tablespoonful for a dose, according to the age. This is a useful and not unpleasant remedy.

The formulæ recommended in the topical treatment of the larynx in croup are proper for the pharynx and larynx in diphtheria (see article on *Croup*). In those old enough, the following is a useful gargle:—

1134. R. Potassæ chloratis, ʒiv
Aquæ, f.ʒiv.
Add to a spoonful of this—
Tincturæ ferri chloridi, f.ʒj.
And gargle with it every hour or two.

For the paralysis following diphtheria, the following formula recommended by Professor METCALFE, of New York) is useful:—

1135. R. Strychniæ, gr.ʒ
Acidi nitrici diluti, f.ʒj
Aquæ, f.ʒviij.
From three to five drops, in a dessertspoonful of water, are to be given three times daily to a child of three years.

The anæmic state which succeeds diphtheria is to be remedied by the administration of iron, for several weeks.

THOMAS HILLIER, M. D., F. R. C. P., ETC., LONDON.

1136. R. Hydrargyri chloridi mitis, gr.iiij-vj
Pulveris ipecacuanhæ compositi, gr.vj.
For six powders; one every two or three hours for a child.

Calomel is now almost discarded in the treatment of diphtheria. Our author is not prepared to give it up. In some of his worst cases, in which recovery occurred, this drug was the remedy. It is not to be used indiscriminately in all cases. It should be limited to children with moderate constitutions, and to cases in which the exudation is firm and thick, or causing laryngeal obstruction with sthenic symptoms. It is to be continued until the bowels are relaxed with greenish stools. At the same time, abundant fluid nourishment, and sometimes wine, is to be given.

DR. H. V. SWERINGEN, FORT WAYNE, INDIANA.

This observer believes that *prompt cinchonism, followed by an alterative tonic, is, if not absolutely a specific, the most proper and successful treatment for diphtheria.* The line of treatment he pursued was as follows, for a child of six years old:—

1137. R.	Quinise sulphatis,	gr. xxxij	
	Acidi tannici,	gr. x	
	Syrupi simplicis,	f. 3j	
	Tincturæ olei menthæ piperitæ,	gtt. iij.	M.

A teaspoonful every three hours until cinchonism is induced.

After which (or it may be administered alternately with the above) the following is given:—

1138. R.	Potassii iodidi,	gr. xxxij	²
	Potassii bromidi,	3ij	⁷ / ₂
	Syrupi simplicis,		
	Tincturæ cinchonæ compositiæ,	aa	f. 3j. M.

Make a solution. A teaspoonful every three hours.

Alum and ipecac, as emetics, are useful when the exudation shows a disposition to extend to the larynx, or when there is much difficulty of breathing, from the tumefaction of the fauces, or from the accumulation of the pseudo-membranous deposits.

THOMAS HAWKES TANNER, M. D., F. L. S., ETC., LONDON.

1139. R.	Quinise sulphatis,	gr. xxiv	
	Acidi muriatici diluti,	f. 3ij	
	Tincturæ ferri chloridi,	f. 3ij	
	Infusi calumbæ,	f. 3vj.	M.

A tablespoonful, in water, thrice daily.

This preparation is also recommended by Dr. AITKEN for the treatment of diphtheria.

WM. AITKEN, M. D., EDINBURGH.

1140. R. Extracti nucis vomicæ,
 Ferri sulphatis, aa gr. v-x
 Pilulæ rhei compositæ, . ʒij-iiij. M.
 For twenty pills. One morning and evening in the paralysis following diphtheria.

DR. A. W. NELSON, OF NEW YORK.

This writer states (*New York Medical Journal*, January, 1874) that he and others have had remarkable success in diphtheria by the administration of chloride of iron internally, and the local use of subsulphate of iron.

1141. R. Liquoris ferri subsulphatis,
 Glycerinæ,
 Aquæ destillatæ, aa f. ʒss. M.
 Apply with a large camel's-hair pencil to the fauces. In severe cases use the subsulphate in its full strength.

DR. B. RHETT, OF CHARLESTON, S. C.

Upon seeing a case of diphtheria, this writer (*Charleston Medical Journal and Review*, October, 1874, January, 1876) at once gives a moderate mercurial purgative (*Hydrargyri chloridi mitis*, gr. x), on the importance of which he lays especial stress. (Compare Dr. HILLIER'S remarks, above). *Tinctura ferri chloridi* is then administered in suitable doses, and the throat is swabbed, gargled, or atomized with the following:—

1142. R. Acidi muriatici,
 Acidi carbolici, aa mxx
 Glycerinæ, ʒj
 Aquæ, ʒviij. M.
 Use frequently.

RÉSUMÉ OF REMEDIES.

Apomorphia, in the dose of gr. $\frac{1}{4}$ by the mouth, or gr. $\frac{1}{16}$ hypodermically, is a certain, rapid and useful emetic in diphtheria.

Cupri Sulphas ranks, according to Dr. W. SQUIRE, with alum as one of the best and most effectual of emetics in diphtheria. He directs:—

1143. R. Cupri sulphatis, gr. v
 Aquæ, f. ʒj. M.
 A teaspoonful at a time to young children.

Perri Chloridi Tinctura is much employed in diphtheria. It should be commenced on the first day of the illness, or as soon as the patient is seen, and continued until the tongue becomes red and the throat improves. When deposit has already taken place, the good effects of the treatment will be shown, not by any alteration in the size of the patch, but by a diminution in the accompanying secretion, and by improvement of the general symptoms.

Guaiacum. The following formula has been recommended:—

1144. R.	<i>Tincturæ guaiaci ammoniatæ,</i>	f. ʒss-v	
	<i>Tincturæ cinchonæ compositæ,</i>	f. ʒss	
	<i>Potassæ chloratis,</i>	ʒiv	
	<i>Mellis,</i>	q. s.	
	<i>Aquæ,</i>	ad. f. ʒviij.	M.

From a teaspoonful to a tablespoonful from one to five hours, or thrice daily, according to the severity of the case.

Guaiacum, as a gargle, in all varieties of *sore throat*, *hoarseness*, etc., is a remedy of ancient and acknowledged repute.

Stassii Bichromas is highly spoken of, gr. $\frac{1}{8}$ — $\frac{1}{2}$ being given in water every half-hour till vomiting is caused, when it is to be continued every two hours.

Sassafras, oil of, is praised as a local application, by Dr. KENNARD, of St. Louis.

Stimulants. Dr. W. SQUIRE, of London, lays down the rule, the less the quantity of nourishment the patient is able to take, the greater must be the dependence on the stimulant. The youngest children may require a teaspoonful of brandy every two hours; a child of three years of age, two teaspoonfuls. It may be given diluted in any way, very small quantities at a time, frequently repeated. Older children take it well mixed with iced or soda water. Champagne is often a good substitute for brandy. The quantity of stimulant ordered must be considered not only in relation to the immediate necessity that may exist for its employment, but also to the probable course of the disease and the strength of the patient; a moderate quantity repeated at regular intervals is of most service in maintaining the strength of the patient where all the symptoms are well marked and likely to go through their full stages; at certain crises of the disease, or where some symptoms only have attained great prominence, the benefit that results from a bold resort to stimulants is surprising, and the effect is the more marked if their use had up to that time been neglected.

EXTERNAL APPLICATIONS.

Argentum Nitratis. Dr. W. SQUIRE, of London, recommends in diphtheria, when the whole of the false membrane is visible, and its margins within reach, to apply to the patch, and to the surrounding turgid mucous membrane, a solution of the nitrate (one part to three of distilled water). When there is much redness and pain, a weaker solution (one part to eight or twelve of distilled water), penciled over the whole surface, tends to prevent further exudation and affords relief. The solid nitrate is objectionable.

Mercurium. The inhalation of the vapor of bromine has been found of service.

Limeis Aqua. Lime-water inhalations are very useful.

Hydrochlorici Acidum. Dr. C. SEDGWICK recommends highly (*Medical Times*, February 27th, 1867) the following formula:—

1145. R. Acidi carbolic, ℥xx
 Acidi acetici, ℥xxx

Mix, and add gradually—

Mellis,
 Tincturæ myrrhæ, ℥℥ f.ʒij
 Aquæ, ad. f.ʒvj. M.

Use as a gargle for adults; apply by means of a sponge to the throat of children.

Ferri Chloridi Tinctura, applied alone or diluted with equal parts of glycerine.

**Muriaticum Acidum*. Dr. HILLIER prefers this caustic to nitrate of silver.

Iodinium. Dr. WARING-CURRAN obtains excellent results from iodine inhalations:—

1146. R. Potassii iodinii,
 Iodinii, ℥℥ gr. iv
 Alcoholis, f.ʒiv
 Aquæ, f.ʒiv. M.

A teaspoonful (gradually increased to a tablespoonful) of the solution is to be placed, with a handful of dried garden sage, in a pint of boiling vinegar in a common inhaling jar, for inhalation. The inhalations are to be repeated about twelve times daily.

**Lacticum Acidum*. Lactic acid inhalations, by means of a spray producer (15 to 20 gtts. aquæ f.ʒss), are said to act as a powerful solvent of the false membrane.

Limonis Succus is strongly recommended as a gargle.

Potassii Chloras in strong solution is an excellent gargle.

Potassii Permanganas. Dr. WATSON CAMPBELL recommends (*Edinburgh Medical Journal*, Feb., 1867) the following:—

1147. R. Potassii permanganatis, gr. x
 Aquæ, f.ʒxx. M.

To be used as a gargle, together with the internal administration of iron and port wine.

Sodæ Chlorinata Liquor, used as a disinfectant gargle.

**Sodii Hyposulphis*. Dr. MAYNARD recommends (*Medical Times and Gazette*, Dec. 30th, 1865) the local application of the hyposulphite of soda. In the very early stages he employs, two or three times a day, the following lotion:—

1148. R. Sodii hyposulphitis, ʒij
 Glycerinæ, f.ʒij
 Aquæ, f.ʒvj. M.

This, he finds, generally removes the incipient exudation in forty-eight hours, or less. In advanced stages he washes the throat out well with warm water by means of a flexible syringe, and then dresses the affected part with the above solution, using at the same time the following gargle:—

1149. R. Sodii hyposulphitis, ʒj
 Glycerinæ, ʒj
 Aquæ, Oj. M.

The effect of this solution he asserts to be most marked ; it appears to solidify and dry up the false membrane, and when the syringe is again used, which it should be frequently, the force of the water will wholly or partially wash it away. The exudation rarely re-forms, and the patient makes a comparatively rapid recovery.

Sulphur. The insufflation of sublimed sulphur is recommended by Dr. BARBOSA (*Practitioner*, November, 1868). The unwashed flower of sulphur should be applied, by means of a simple tube slightly bent, directly to the affected surfaces.

**Terebinthine Oleum.* Dr. SYMONDS advises (*British Medical Journal*, March 14th, 1868) the application of turpentine at the very commencement. Hot turpentine epithems also often relieve the local distress.

HYDROCEPHALUS.

C. WEST, M. D.

The value of *purgatives* can scarcely be overrated in acute hydrocephalus, but they must be given so as not merely to obtain free action of the bowels, but to maintain it for some days. This end is best secured, after having once overcome the constipation, by giving small doses of a purgative every five or six hours. The administration of strong cathartics every morning will not answer the end nearly so well ; if they cause sickness, it is better to give a single full dose of calomel, and follow it up with sulphate of magnesia at short intervals. The following mixture is then advised :—

1150. R.	Magnesiæ sulphatis,	3j	
	Potassæ nitratis,	gr. x	
	Syrupi limonis,	f. ʒiij	
	Aquæ,	f. ʒix.	M.

A dessertspoonful (f. ʒij) thrice daily, for a child of one year.

In all cases, of course, the solution and regulation of the purgatives must be determined by the strength of the child.

The local abstraction of blood by *leeches* sometimes proves serviceable when there is much febrile action. They should be placed on the crown of the head rather than on the temples. They are inadmissible when the patient is much debilitated.

J. S. RAMSKILL, M. D.

The *iodide of iron* is usually well borne by hydrocephalic chil-

PERTUSSIS.

PROF. JOHANN STEINER, M. D., OF PRAGUE.

This judicious author remarks that we have no specific remedy for whooping cough, and of all those which have been recommended, belladonna, in doses of the extract of $\frac{1}{16}$, $\frac{1}{8}$ or $\frac{1}{4}$ a grain three or four times a day, either alone or in combination with quinine or the oxide of zinc, seems of greatest service. The dose of belladonna is to be gradually increased until symptoms of intoxication appear. When there is abundant mucous secretion and no vomiting, an occasional emetic is useful.

Prof. BARTHOLOW and others consider the best form for administering belladonna is a solution of the sulphate of atropia :—

1157. R. Atropiæ sulphatis, gr. j
 Aquæ destillatæ, f. 3j. M.
 Two to four drops at a dose.

He believes it most effective in the spasmodic stage, when there is profuse bronchial secretion.

MR. JOHN REYNOLDS, LONDON.

1158. R. Quiniæ sulphatis, grs. xvj
 Acidi sulphurici diluti, q. s.
 Tincturæ aurantium, f. 3j
 Aquam, ad. f. 3ij. M.
 Two teaspoonfuls every three hours.

Mr. REYNOLDS claims for quinine a *specific abortive* power over whooping cough. With the above formula he cures his cases in two days. Other physicians report favorably of the method. To do good it must be pushed to a quantity equal to a full antiperiodic dose. To a child under three years, ten grains should be given in twenty-four hours; to a child twelve years old, from sixteen to twenty grains should be given in the same time.

DRS. MEIGS AND PEPPER, PHILADELPHIA.

1159. R. Aluminis, ʒijss
 Syrupi zingiberis,
 Syrupi acaciæ,
 Aquæ, ss f. 3j. M.
 A tablespoonful thrice daily, every five or six hours.

This recipe, when prepared with good syrups, tastes very much like lemonade, rendering it acceptable to children.

Our authors more generally employ alum in combination with belladonna. They have obtained better results from the following formula than any other ever employed:—

1160. R.	Extracti belladonnæ,	gr. j	
	Aluminis,	3ss	
	Syrupi zingiberis,		
	Syrupi acaciæ,		
	Aquæ,	aa	f. 3j. M.

A teaspoonful morning, noon and night; also once in the night, if the cough be troublesome.

1161. R.	Potassæ carbonatis,	ʒj	
	Cocci,	ʒss	
	Sacchari albi,	3j	
	Aquæ,	f. 3iv.	M.

Dessertspoonful thrice daily to a child a year old.

This mixture has long enjoyed a high reputation in this country and abroad. Our authors, believing its efficacy to be due to the carbonate of potash, ordinarily omit the cochineal. This recipe, together with the alum and belladonna mixture given above, are the most useful agents we have to keep down the violence of the disease.

DR. GOLDING BIRD, LONDON.

1162. R.	Aluminis,	gr. xxv	
	Extracti conii,	gr. xij	
	Syrupi rhæados,	f. 3ij	
	Aquæ anethi,	f. 3ij.	M.

A medium-sized spoonful every three hours in the second or nervous period of the disease, after the subsidence of inflammatory symptoms, and when the patient is harassed and exhausted by the attempts to get rid of the copious bronchial secretion.

Under these circumstances, this author considers alum, which he administers according to the above formula, the most satisfactory of all remedies, affording the speediest and most marked relief.

E. M. SNOW, M. D., PROVIDENCE, R. I.

Our author has often recommended *carbolate of lime* as a remedy to relieve the spasmodic fits of coughing in this disease, and the evidence is abundant that it is of real value for this purpose. It is used by exposing it to the air in the rooms where the children live and sleep, so that the odor will be plainly perceptible at all times.

Dr. VOGELSANG, of Switzerland, finds that one or two scruples of bromine, and as much bromide of potassium, to a tumblerful of hot water, placed in the room of a child suffering from whooping cough, affords it great relief. The mixture should be renewed three or four times a day.

RÉSUMÉ OF REMEDIES.

Acidum Hydrocyanicum, useful after the catarrhal symptoms have diminished. *Belladonna* (see above). Prof. J. LEWIS SMITH, of New York, commonly employs the *extract of belladonna* in one-grain pills. For an infant one year old, one pill is dissolved in eight teaspoonfuls of water; three years, in four teaspoonfuls. A teaspoonful to be given once, or, if there be no appreciable effect, three or four times daily. If there be no modification of symptoms, an additional half-spoonful should be given on the third day.

Castanea, chestnut leaves, recommended by Dr. J. LUDLOW, of Cincinnati:—

1163. R.	<i>Castanea vesca</i> ,	$\frac{3}{4}$ ss	
	<i>Aque bullientis</i> ,	Oj.	M.

Add to this a pint of cold water; sweeten with white sugar to make it palatable, and administer cold. As much should be given during the day and evening as the patient can be induced to take.

Camphora Monobromas is a useful sedative.

Chloral, in small doses, allays the cough.

Potassii Bromidum and *Ammonii Bromidum* are of value as sedatives.

Potassii Sulphuretum, commended by Dr. MACKEILCAN, of Canada, in doses of gr.ijj-vj in sweetened water.

Terebinthina Oleum, in pertussis complicated with irritative fever, bronchitis or convulsions, is praised by Dr. BEDFORD BROWN, of Alexandria, Va.

Tonka Baza has been employed with success by Dr. JOHN COOPER, of Philadelphia. Ott.v-vij of the fluid extract every three hours to a child five years old.

PNEUMONIA, INFANTILE.

THOMAS HILLIER, M. D., LONDON, F. R. C. P., ETC.

Usually the best treatment in the lobular pneumonia of children is to keep the patient in bed in a room of about 60°, well ventilated, without a draught, milk diet during the height of the fever, and, when the temperature falls, some good beef-tea, and a simple saline mixture, such as—

1164. R.	Potassæ citratis,	℥j	
	Syrupi aurantii,	f.℥ij	
	Aquæ,	q. s. ad. f.℥ij.	M.

Two teaspoonfuls *pro re natâ*.

The tendency of the disease in children is to recovery. The great point is to do nothing which will interfere with rapid convalescence. Antimony is seldom desirable or necessary; if given at all, it should be confined to those cases in which the pulse is full and strong, the temperature very high, and the skin and mucous membranes very dry and injected, and it should be given only for a short time, at an early stage of the disease. Counter-irritation is not much to be relied upon. When there is severe pain in the side, a mustard plaster is of service. Blisters are seldom or never to be recommended, certainly not in the acute stage. If resolution comes on very slowly, and there is persistent pleuritic pain, an occasional flying blister will be of service. Calomel is not to be recommended, except as an occasional aperient. If the pneumonia is complicated with bronchitis, and the bronchi contain much mucus, a stimulant expectorant is indicated, such as—

1165. R.	Ammonia carbonatis,	gr. viij-xij	
	Tincturæ scillæ,	℥xx	
	Syrupi,	f.℥ij	
	Decocti senegæ,	q. s. ad. f.℥ij.	M.

Two teaspoonfuls for a child three years old.

During convalescence, the use of iron, in a mild form, is of service, as—

1166. R.	Ferri et quiniæ citratis,	℥j	
	Syrupi limonis,	f.℥ij	
	Aquæ,	q. s. ad. f.℥ij.	M.

Two teaspoonfuls thrice daily.

EUSTACE SMITH, M. D., LONDON, M. R. C. P., ETC.

1167. R. Liquoris ammoniæ acetatis, f.ʒiv
 Potassæ nitratis, ʒj
 Potassæ bicarbonatis, ʒiiss
 Spiritûs ætheris nitrosi, f.ʒiiss
 Aquæ carui, q. s. ad. f.ʒvj. M.

A tablespoonful every third hour for a child six or seven years old, in cases of "pulmonary phthisis." At the same time, the chest should be kept covered with hot linseed-meal poultices, frequently renewed, and the child confined to his nursery or bedroom.

After the cough has become loosened, and the oppression of the chest has subsided, expectorants should be given with an alkali:—

1168. R. Spiritûs ammoniæ aromatici,
 Spiritûs ætheris nitrosi,
 Vini ipecacuanhæ, aa f.ʒj
 Potassæ bicarbonatis, ʒj
 Infusi calumbæ, q. s. ad. f.ʒvj. M.

A tablespoonful every sixth hour.

Afterward, when the secretion is free, easily brought up, and the fever has disappeared, an astringent is useful, combined with expectorants and a little opium:—

1169. R. Liquoris ferri pernitratis,
 Acidi nitrici diluti, aa f.ʒj
 Tincturæ opii camphoratæ, f.ʒij
 Oxymellis scillæ, f.ʒj
 Infusi calumbæ, q. s. ad. f.ʒvj. M.

A tablespoonful thrice daily.

When unabsorbed pneumonic deposits continue, alkalies are extremely useful. The inhalation of sprays of weak solutions of bicarbonate, nitrate, or chlorate of potash, promotes expectoration; thus, for

INHALATION.

1170. R. Potassæ bicarbonatis, gr. x
 Aquæ, f.ʒj. M.

To be inhaled, by atomization, twice a day.

At a later stage, an astringent spray may be used, such as—

1171. R. Acidi tannici, gr. iij
 Aquæ, f.ʒj. M.

For atomization, twice a day.

In chronic pneumonic consolidation, irritants are sometimes useful:—

1172. R. Olei tigllii, f. ʒj
 Linimenti saponis, f. ʒj. M.

To be rubbed into a limited spot on the chest twice a day till pustulation, and then once a day for a week.

So long as there is much heat of the skin counter-irritants should not be employed.

PROF. J. LEWIS SMITH, M. D., NEW YORK.

In the earlier stages, the following is a useful formula for a child of five years:—

1173. R. Tincturæ ipecacuanhæ compositiæ, gtt. xvj-xxiv 2 2 5-
 Tincturæ aconiti radicis, gtt. xvj
 Syrupi tolutani, ad. f. ʒj. M.
 Aquam,

One teaspoonful every three hours.

In the second stage, that is when there are signs of lung hepatisation, such as bronchial respiration and dullness on percussion, aconite and veratrum viride do harm. The following may then be employed:—

1174. R. Morphis sulphatis, gr. j
 Syrupi ipecacuanhæ, f. ʒj
 Syrupi tolutani, f. ʒij. M.

Teaspoonful every three hours.

In feeble children, and in secondary pneumonitis, *quinine* is preferable to any other agent for reducing the temperature and pulse, as it does so without causing depression.

RACHITIS.

DR. EUGENE BOUCHUT, OF PARIS.

1175. R. Sodii phosphatis, ʒj
 Sodii carbonatis, ʒij
 Sacchari lactis, ʒij. M.

Divide into three pinches. One at each meal to rachitic children. Cod-liver oil, salt and aromatic baths, frictions on the skin with flannel impregnated with aromatic vapors.

DR. NORMAN MOORE, LONDON.

The first point in the treatment of rickets is the regulation of the diet. If past eight months, the child must be weaned: if

younger, it should be partly fed on cow's milk. Cod-liver oil is the most valuable remedy. General tonics and change of air are to be urged.

SCARLET FEVER.

PROF. J. LEWIS SMITH, M. D., NEW YORK.

In moderately severe and grave cases the external treatment should be by cold applications to the head and sponging the face and arms. This may be frequently repeated. Immersion in cold water or pouring it upon the person is questionable, as such a shock may increase the liability to chronic convulsions.

The itching of the skin should be relieved by *inunction*. The best substitute for this purpose is sweet oil or glycerine, to each ounce of which six or eight drops of carbolic acid are added. [Other authors commend, as still better, cocoa butter, *theobroma cacao*, which has a marked cooling effect.] The inunction should be made with linen or muslin, and the substance should be applied frequently to those parts of the surface which itch.

As an *internal remedy*, carbonate of ammonia is one of the best:—

1176. R. Ammonii carbonatis,
Ferri et ammonii citratis, ss 3ss
Syrupi simplicis, f.℥iv. M.

A tablespoonful, every three hours, to a child three years old.

In the malignant forms of the disease, with the temperature at 105°, drowsiness, delirium and restlessness, the sulphate of quinine, in full doses, is more useful than any other remedy; gr. iij–v, thrice daily, to a child of five years. If the stomach will not retain it, give doses of gr. xij by enema. A hot mustard-bath or foot-bath develops the rash, and allays nervous excitement; it is especially indicated if the convulsions occur attended by disappearance of the eruption.

For the *pharyngitis* a slice of salt pork, cut thin, and stitched to a single thickness of muslin, should be applied to the throat. It should pass from ear to ear. This application should be continued throughout the fever, being left off for a day or two if too much

ALFRED VOGEL, M. D., PROFESSOR IN THE UNIVERSITY OF DORPAT,
RUSSIA.

1192. R. Sodæ biboratis, ℥j
Aquæ, f. ʒj. M.
To be used to cleanse the mouth, every hour, in cases of *stomatitis* in
infants.

This feebly alkaline solution combats the tendency of the profusely secreted saliva rapidly to become sour. The chest is to be protected against getting wet by a piece of oil-silk, which is secured under the jacket, and the infant is only to be allowed to drink cow's milk, with water. The painful ulcers may be relieved for many hours, and even permanently, by cauterizing them with the solid nitrate of silver.

In idiopathic stomatitis spontaneous recovery takes place in eight, or, at the longest, fourteen days. Symptomatic stomatitis in febrile disease does not usually call for any particular interference.

1193. R. Potassæ chloratis, ℥j
Syrupi, f. ʒj
Aquæ, q. s. ad. f. ʒiv. M.
The whole amount to be administered in the course of the day to a
child one year of age, in *putrid sore mouth*.

At the end of this time the smell, in all cases and in every degree of the infection, is *completely abolished*. The remedy should be continued three or four days, or the disease will return. Our author has never found it necessary to employ this remedy longer than four days, nor has he ever noticed any bad effects, such as loss of appetite, diarrhœa, etc.

TONSILLITIS.

PROF. JOHANN STEINER, M. D., OF PRAGUE.

When the case is seen early, an abortive treatment should be attempted, by penciling the tonsils with a strong solution of nitrate of silver, as—

1194. R. Argenti nitratis, ʒi
Aquæ destillatæ, f. ʒj. M.
Apply with a camel-hair pencil.

SCARLATINA.

STILES KENNEDY, M. D., OF MICHIGAN.

According to this writer, two medicines only have gained much reputation for mitigating or subduing the symptoms of fever in this disease, or the disease itself, and the profession is about equally divided as to their respective merits. One is the *chlorine mixture*, which, for ready use, may be prepared about as follows:—

1179. R.	Potassæ chloratis,	3j	
	Acidi muriatis,		
	Aquæ,	aa	f. 3j. M.

From two to eight drops of this to a tablespoonful of water may be given every two hours. For children over eight years of age a solution made of two drachms of the mixture and a pint of water is strong enough to give, in tablespoonful doses. It is generally prepared sweetened with simple syrup, but at best it is an unpleasant dose to many children, and often makes them complain of burning in their throats.

The other medicine alluded to is the *liquor ammoniæ acetatis* of the pharmacopœia. Probably no anti-febrile mixture has stood the test of the experience of the profession for so long a time with so much satisfaction as this, not in scarlet fever particularly, but in all febrile diseases; and our author does not remember ever to have heard it complained of when the vital powers begin to flag. An excess of carbonate of ammonia may be added in the quantity of five or ten grains to the ounce:—

1180. R.	Ammoniæ carbonatis,	ʒij-iv	
	Liquoris ammoniæ acetatis,	f. ʒiijss	
	Syrupi simplicis,	f. ʒss.	M.

Give from a half to a whole tablespoonful in a little water, every one or two hours, according to the age of the patient and the urgency of the symptoms.

H. T. CLEAVER, M. D., IOWA.

1181. R.	Acidi carbolici,	ʒi	
	Alcoholis diluti,	f. ʒij.	M.

Mix a teaspoonful of this with a tablespoonful of water, and use either as a gargle or with the mop, depending upon age and ability to gargle, say once every two hours. Of the same give ten to

enty drops in mucilage of acacia at the same intervals, the dose pending upon age of patient.

Our author has been as much surprised as gratified at the almost mediate relief afforded by the application of this to the inflamed roat of scarlatina.

DR. N. GALLOIS, PARIS.

1182. R. Acidi gallici, gr.iss
Syrupi, f.3v
Aque, f.3xv. M.

To be taken in divided doses in the course of the day, in the albuminuria and anasarca which complicate scarlatina.

DR. H. ROGER, PARIS.

1183. R. Tincturæ digitalis, gtt.x
Syrupi scillæ, f.3ijss
Syrupi acaciæ, f.3vijs
Syrupi lactucarii, f.3xv. M.

A teaspoonful to be given to children in the albuminuria of scarlatina every two hours. Paint the lumbar region with the dilute tincture of iodine, rub the limbs with a flannel impregnated with the vapors of benzoïn, and administer a gentle laxative once or twice a week.

STOMATITIS.

WILLIAM AITKEN, M. D., EDINBURGH.

1184. R. Liquoris ferri pernitratis, gtt.x
Syrupi aurantii, f.3ss
Aque, f.3vss. M.

A fourth part to be given to a child three or four years of age, four times a day, in *aphthous stomatitis*.

In cases where parasitic vegetable productions abound, the application of the following solution removes the lesions in twenty-four hours:—

1185. R. Sodæ sulphitis, ʒi
Aque, f.3j. M.

The acid secretions of the mouth decompose the salt and set free e sulphurous acid, which destroys the parasite.

1186. R. Acidi carbolici fluidi, f.3ss
Aque bullientis, Oviij. M.

Allow the solution to become warm or tepid, and syringe the mouth frequently with it, in *cancrum oris*.

DR. G. CALDERWOOD, OF ENGLAND.

This writer remarks on the administration of santonine (*British Medical Journal*, February, 1875), that it should always be given for three or four days continuously before a purgative is prescribed. To give it with, or only once before, a cathartic, does not accomplish the work completely. It acts toxically, and must have time to do its work. The worms are passed like other fecal matter, when dead; and so long as they are alive, no amount of purging will bring them all away.

PART II.

Surgical Therapeutics.

I. WOUNDS AND INJURIES.

The Open Treatment of Wounds—Water Dressings—Earth Dressings—Antiseptic Dressings—Local Anæsthetics—Bites and Stings—Burns and Scalds—Frost-bite—Sprains and Bruises.

THE OPEN TREATMENT.

This simplest of all methods of dressing amputations and other wounds has been practiced with great success in the hospital at Berne, Switzerland; Bellevue Hospital, New York; by Professor F. PEYRE PORCHER, of Charleston, South Carolina, and others.

As practiced at Bellevue in amputations, it is as follows:—The flaps are not even approximated, but left entirely open. A pillow of oakum is placed under the stump, which is allowed to rest upon this support until the wound is nearly healed. A small piece of gauze is placed over the contour of the stump, and a cradle is placed over the limb, so that the clothes may not come in contact with the painful extremity. This is all the dressing that is employed; no sutures are used, except in the lateral skin-flap method. No adhesive plaster is employed, no oil-silk is placed over the stump, no bandage is applied, no dry charpie is stuffed into the wound, no fenestrated compresses are placed between the flaps; in other words, the stump is left entirely alone, just as the surgeon made it in his amputation. The wound is thus allowed to drain freely, and the stump is gently washed at frequent intervals by means of an Esmarch's wound-douche. The water in this irrigator is impregnated with crystals of carbolic acid, and, after this ablution, balsam of Peru (which makes a fine stimulating application) is poured over

Among the best known antiseptics the following may be mentioned :—

Chlorine-water, in its concentrated form (one to ten) ; it is rather painful, and when diluted its application must be frequently renewed.

Iodine, a very active antiseptic, and especially useful against diphtheria and hospital gangrene; the objection to it is that the applications must be frequently renewed, and are then likely to cause acute inflammation.

Glycerine, a very useful and cleanly dressing.

Alcohol, theoretically excellent, but its rapid evaporation is a great objection. GOSSELIN uses it for all wounds of the head and face, to prevent suppuration, and favor union by first intention.

Camphor, only slightly soluble in water, and is not a deodorizer.

Olive oil, useful to prevent inoculation by falling spores, but is useless after infection has taken place.

Subacetate of lead, very highly recommended; even in a weak solution it kills bacteria, and has a slight astringent effect upon the surface of the wound, but it is not a good deodorizer.

Carbolic acid has become very popular of late years; BILLROTH thinks it is in no way superior to many others; its odor is very offensive to some, and when dissolved in oil it ruins the dressings and bedding.

Salicylic acid, much lauded, but probably less active than carbolic acid.

Sulphurous acid, a cheap, painless and efficient antiseptic in many cases. The various *sulphites* depend on this acid for their efficacy.

Boracic acid, an agreeable, cooling application, increasing in favor.

Permanganate of potash, 3j to water f.3j, is an excellent deodorizer, but not much of a disinfectant, and stains the bedding, etc.

Chloral hydrate, the use of which as a local application seems on the increase. It is quite as active as boracic acid, and has no unpleasant flavor.

The most eminent living teacher of antiseptic surgery is

PROF. JOSEPH LISTER, OF EDINBURGH.

The antiseptics he prefers are carbolic and boracic acids. His operations are performed under a spray of a solution of carbolic

acid, one part to forty of water. The saturated solution, one to twenty, is used for purifying the epidermis of a part about to be operated on, while in wounds seen several hours after the accident a solution of carbolic acid, one part, to pure alcohol five parts, is introduced into the recesses of the wound by means of a syringe and a gum-elastic catheter.

The formulæ for the various antiseptic preparations of this eminent teacher are as follows :—

Carbolized Oil :—

1204. R. Acidi carbolici crystalisati, $\mathfrak{z}\text{j}$
 Olei lini, $\mathfrak{f}\mathfrak{z}\text{iv}$.
 Dissolve.

Carbolized Putty :—

1205. R. Olei carbolati (above), $\mathfrak{f}\mathfrak{z}\text{ij}$
 Cretæ preparatæ, q. s.
 To make a firm paste.

Antiseptic Lac Plaster :—

1206. R. Shellac, $\mathfrak{z}\text{ij}$
 Acidi carbolici crystalisati, $\mathfrak{z}\text{j}$.
 Heat the lac, with one-third the acid, over a slow fire; when completely melted add the remainder, mix, strain and spread.

Antiseptic Gauze :—

1207. R. Paraffini, $\mathfrak{z}\text{xvj}$
 Resinæ, $\mathfrak{z}\text{iv}$
 Acidi carbolici crystalisati, $\mathfrak{z}\text{j}$.
 Melt together. Muslin gauze is dipped in the melted mass, and well wrung or pressed while hot.

Antiseptic Adhesive Plaster :—

1208. R. Acidi carbolici crystalisati, $\mathfrak{z}\text{j}$
 Aquæ bullientis, $\mathfrak{f}\mathfrak{z}\text{viiij}$. M.
 Dip ordinary strapping in this and let it dry.

1209. R. Acidi boracici, $\mathfrak{z}\text{j}$
 Cereæ albæ, $\mathfrak{z}\text{j}$
 Paraffin, $\mathfrak{z}\text{j}$
 Olei amygdalæ dulcis, $\mathfrak{z}\text{ij}$.

Melt the wax and paraffin, stir in a warm mortar till the mass thickens, then cool, and reduce in a cold mortar to a soft ointment. Apply on fine rags to exposed ulcerous surfaces.

1210. R.	Plumbi oxidi,	$\overline{\text{ss}}$ iv	
	Acidi carbolic,	$\overline{\text{ss}}$ vj	
	Olei olivæ,	f $\overline{\text{ss}}$ iv	
	Ceræ,	$\overline{\text{ss}}$ j.	M.

This plaster is to be prepared without water, and spread upon a thin cloth. To be employed as a dressing for wounds which need disinfection.

Professor LISTER employs boracic acid in two forms: boracic lint, a dressing material, almost non-stimulating, for wounds, where the crystals of the antiseptic in the lint are only dissolved gradually by the discharges of the wound; and a lotion of boracic acid (three to five per cent.), partly for washing, and partly as a spray. The antiseptic power is less than that of carbolic acid, and stimulates the tissues less, but, being non-volatile, it is not so evanescent. LISTER, therefore, prefers this substance for superficial wounds, such as those of plastic operations, in the treatment of ulcers, and, lastly, for the purpose of the healing of loose portions of skin on granulating surfaces.

In the case last mentioned the method is the following:—After the sore is brought into an aseptic condition, it is carefully washed with boracic-acid solution, then the pieces of skin to be transplanted are placed upon the surface of the granulations, under protection of the boracic spray. Without fixing specially the small portions of skin, a piece of protective is laid over the wound after it has been dipped into boracic acid solution; upon this a layer or two of boracic lint similarly treated; the whole fixed with a gauze bandage. As the discharge is scanty, the dressing may be left unchanged two, three, or four days.

In regard to chloride of zinc, Professor LISTER employs a solution, forty grains to the ounce of water, and with the following indications:—

1. For wounds which have been for a longer or shorter time exposed to the influence of atmospheric air, and in which a superficial putrefaction of the tissues has occurred, in order to be able, after the destruction of the products of putrefaction and the infected particles of the tissues, to regard the wounds as aseptic. To this class belong superficial surfaces of ulcers, with sloughing of granulations and stinking discharges.

2. Also for recent wounds, before putting on the first dressing, when the wound contains some focus of putrefaction, such as sinuses communicating with a joint subjected to excision. In such a case,

the sinuses are also injected with the solution, in the hope of correcting the putrefaction of their contents, though the attainment of this is always uncertain.

3. He employs the chloride of zinc for recent wounds in the neighborhood of the different cavities of the body, and where the continual bathing of the wound with the putrid secretion of the cavity would render infection of the former possible.

Of the numerous other dressings which depend largely for their virtues on the antiseptic principle, the following formulæ give abundant room for selection.

DR. MINNICH, OF VENICE.

1211. R. Sodæ sulphitis, $\bar{3}i$
Glycerinæ, $f. \bar{3}i$
Aquæ destillatæ, $f. \bar{3}ix.$ M.
As a lotion for dressing wounds and in erysipelas.

DR. ROCCO GRITTI, OF MILAN.

1212. R. Sodii sulphitis, $\bar{3}ijss$
Amyli pulveris, $\bar{3}ij$
Glycerinæ, $f. \bar{3}ijss.$

Mix and warm in a water-bath until the preparation shall have acquired the consistence of a soft cake. Used to disinfect wounds, diminish the secretion of pus, and stimulate cicatrization.

MR. THOMAS KIRKLAND, LONDON.

1213. R. Tincturæ myrrhæ,
Liquor calcis, aa $f. \bar{3}ij.$ M.
As a lotion in unhealthy wounds.

1214. R. Extracti cinchonæ, Div
Adipis, $\bar{3}x.$ M.
To be applied by means of charpie to gangrenous wounds. Internally, preparations of cinchona and a tonic regimen.

PROF. DEMARQUAY, PARIS.

1215. R. Potassii permanganatis,
Calcii carbonatis pulveris,
Amyli pulveris, aa $\bar{3}j.$ M.
A painless dressing for fetid wounds.

1216. R. Potassii permanganatis, $gr. xv$
Aquæ destillatæ, $Oij.$ M.
A wash for infected wounds.

DR. ADOLPH ADRIAN, OF GIESSEN.

1217. R. Picis liquidæ, $\bar{3}iss$
Ovi vitelli, $\bar{3}ijss$
Aquæ, $f. \bar{3}xij.$ M.

This mixture may be diluted with water, and serve to inject and wash the surface of wounds.

1218. R. Picis liquidæ,
Ovi vitelli, aa 3ijss
Glycerinæ, f. 3v. M.

This preparation, which has the consistence of an ointment, does not adhere to the skin like the ordinary tar ointment. It may be diluted with water, and employed for the dressing of gangrenous wounds and rebellious ulcers.

DR. LEMAIRE, PARIS.

1219. R. Alcoholia,
Acidi carbolicæ crystalisati, aa q.s.

Apply locally in poisoned wounds, small-pox pustules, etc.

1220. R. Olei olivæ, f. 3vij
Acidi carbolicæ crystalisati, 3j. M.

Use as an antiseptic liniment.

DR. LEONARD CANE, LONDON.

1221. R. Acidi boracici,
Aquæ bullientis, q s. ad. saturandum.

This may be used as a lotion, with lint, cottonwood, etc.

DR. LEWIS D. MASON, BROOKLYN.

Carbolated bran. Add crude carbolic acid slowly, stirring at the same time, until it is an adherent mass. Used as a "germ-proof" dressing.

Carbolated earth is made by adding 2 parts of crude carbolic acid to 100 parts of dry, sifted earth.

M. MAGNIS-LAHENS, OF TOULOUSE.

Adds charcoal to coal-tar (33 per cent. of the latter), and thus obtains a light and porous powder, which does not irritate wounds, and which is easily washed off with cold water. This combination is a very useful mixture of two antiseptic substances. The charcoal absorbs the gases formed by fermentation, coagulates the albumen, and prevents its decomposition; thus effectually assisting the carbolic acid contained in the coal-tar.

DR. P. H. WATSON, ROYAL INFIRMARY, EDINBURGH.

This surgeon employs *chloral* as his antiseptic, and states (*Edinburgh Medical Journal*, Feb., 1876) that it is quite as efficient as carbolic acid, has no such unpleasant odor, and deadens pain promptly. He employs it in four forms—

1. A lotion of 5 to 40 per cent. in water, for cleansing away discharges around a wound, cleansing sponges used in operations, and analogous purposes.

2. An ointment composed of concrete paraffin, white wax (Scotch)

and almond oil, to which 1-12th to 1-8th of chloral is added, while the other ingredients are liquefied by heat. The components of the ointment should at once be rubbed together, covered, to prevent the evaporation of the chloral, and cooled to a concrete form as rapidly as may be. It is afterward rubbed up with a few drops of the solution of chloral, to disintegrate it, and prevent its crystalline form being reassumed.

3. An external excipient dressing is made by soaking lint in a solution of chloral (ʒj ad. ʒj). It is then wrung out of this and carefully dried. Care is necessary to avoid long exposure or a high temperature, as this volatilizes the chloral.

4. Lint soaked in a solution of chloral in olive oil (1-8), employed to fill cavities, such as those left in some excisions, and to employ as compresses when it is desired to prevent bleeding from the cut surfaces in operations for the removal of *dead* bone.

In some cases, when the chloral appears to act as an irritant, even when carefully prepared, it may be necessary to interpose some impermeable material between the line of operation and the dressing.

DR. JOHN BALFOUR, L. R. C. S., EDINBURGH.

Through the *Edinburgh Medical Journal*, 1874-6, this surgeon has several times præconized the following as a most excellent antiseptic lotion :—

1222.	R.	Acidi sulphurosi,	f.ʒj	
		Aquæ destillatæ,	f.ʒiij.	M.

It at once alleviates pain, minimizes suppuration, is easily applied, and facilitates dressing the wound, while it costs almost nothing. When the fingers are the parts injured, a large teacup is filled with the wash and put by the patient's side, and into this the injured part, covered with the thinnest rag to be had, is dipped as often as desired. Should the injured part be the hand or any other part of the body, it is supported on a pillow covered with gutta-percha tissue or oil-skin, and the wash is applied by means of a little tow, which is allowed to remain in the cup.

In the Throat Hospital, London, as a stimulant and antiseptic gargle and local application, they use the following *aqua acidi sulphurosi* :—

1223.	R.	Acidi sulphurosi,	ʒi	
		Aquæ destillatæ,	f.ʒx.	M.

LOCAL ANÆSTHESIA.

DR. B. W. RICHARDSON, LONDON.

This distinguished observer introduced the "spray-producer" which bears his name. He recommended that it should be used with rectified, perfectly neutral *sulphuric ether*, the spray thrown from a distance of two or three inches upon the skin.

Dr. LETAMENDI has added the valuable suggestion that after about two minutes an incision, a half inch in length, be made in the centre of the reddened part, not deeper than the papillary layer of the cutis. This produces an "anæmic zone," and then the spray, being again thrown on the part, in a few minutes the anæsthesia is complete.

Carbon bisulphide is an active local anæsthetic. A pledget of cotton, saturated with it and applied to the painful part, will rapidly benumb the nerves of sensation.

Dr. S. R. NISSLEY (*Journal of Materia Medica*, July, 1871) found that the following is a successful local anæsthetic:—

1224. R. Rhigolene,
Oil of peppermint, *equal parts.*

The observation of Dr. HORWATH, of Kiew, that absolute alcohol, at a temperature of 20° Fahr., is a most efficient local anæsthetic, deserves to be remembered. He finds it far superior to cold ether, or ice, or the spray of volatile substances. The part may be immersed in it, or it may be poured upon it by an irrigator.

BITES AND STINGS.

PROFESSOR HALFORD, M.D., OF AUSTRALIA.

The treatment recommended by this surgeon in poisonous bites from venomous serpents, spiders, etc., is the injection of liquor ammoniæ fortior, diluted with two or three times its bulk of water. Of this mixture, 20 to 30 drops are to be injected into one of the large veins, as near to the bite as possible. If the symptoms are relieved, but the patient seems still in danger, the injection may be repeated as soon as the operator deems it prudent.

As used by Dr. A. S. TODD, of Virginia (*Trans. Va. State Med. Soc.*, 1872), the liquor ammoniæ is mixed with flaxseed meal or slippery elm bark, to make a cataplasm, and applied to the part; while internally the patient was given liquor ammoniæ aromaticus, f.ʒj, in a wineglass of water, every three hours.

The above is the only specific treatment for mortal bites. When it cannot be carried out, the course to be pursued is to keep the patient alive by copious stimulation and artificial respiration. In rattlesnake bite, for instance, a gill of whisky should be given every ten or fifteen minutes until signs of intoxication supervene. Of course, in the meanwhile, efforts should be made by *washing*, *suction*, *ligature*, and *cauterization*, to prevent the poison entering the system.

Prof. BRAINARD, of Chicago, made a series of experiments with the following:—

1225. R.	Iodinii,	gr. v	
	Potassii iodidi,	gr. xv	
	Aquæ destillatæ,	f.ʒj.	M.

Use as hypodermic injection.

His directions are to place a cupping glass over the wound and pass the nozzle of the syringe beneath the skin under the edges of the cup, throwing in sufficient of the above to "infiltrate the tissues."

BURNS AND SCALDS.

PROF. S. D. GROSS, M. D.

1226. R.	Plumbi carbonatis,	ʒij
	Olei lini,	q. s.

To make a fluid of the consistency of thick cream.

This is ordinary white-lead paint. The surface should be thickly coated with it.

DR. JOHN H. BRINTON, PHILADELPHIA.

1227. R.	Aquæ calcis,	f.ʒviij	
	Olei amygdalæ amaræ,	gtt. ij.	M.

Beat up f.ʒij of this with ʒiv of well-washed lard, and apply freely over the burned surface, on soft cotton cloth, changing twice a day.

1239. R. Camphoræ, Div
Alcoholis diluti, f.ʒiij
Glycerinæ, f.ʒv. M.

Apply several times a day, to non-ulcerated chilblains.

PROF. A. GIACOMINI, UNIVERSITY OF PADUA.

1240. R. Plumbi acetatis, ʒi
Adipis, ʒi
Aque lauro-cerasi, f.ʒij. M.

A useful pomade, applied morning and evening, to chilblains.

1241. R. Acidi muriatici diluti, f.ʒiiss
Balsami peruviani, ʒss
Spermaceti, ʒi
Cereæ albæ, ʒss
Olei amygdalæ dulcis, ʒj. M.

1242. R. Tincturæ benzoini, f.ʒj
Glycerinæ, f.ʒij
Olei lini, f.ʒss
Cerati, ʒij
Spiritus lavandulæ, ℥xx.

Mix with care. To be used to anoint, morning and evening, ulcerated chilblains.

1243. R. Acidi sulphurosi, f.ʒiij
Glycerinæ, ʒss
Aque, ℥ss f.ʒj. M.

A good wash for chilblains. One application is generally sufficient.

1244. R. Acidi carbolici, ʒj
Tincturæ iodinii, f.ʒij
Acidi tannici, ʒij
Cerati simplicis, ʒiv. M.

Make an ointment.

1245. R. Tincturæ opii,
Tincturæ croci,
Spiritus ætheris nitrici, equal parts. M.

Apply locally, by brushing on the parts.

SPRAINS AND BRUISES.

DR. N. GALLOIS, PARIS.

1246. R. Sodæ boratis, \mathfrak{zj}
 Alcoholis diluti, $\text{f.}\mathfrak{z}\text{iss}$
 Aquæ destillatæ, $\text{f.}\mathfrak{z}\text{ij.}$ M.

To be applied in lotion several times a day, on bruises with excoriated skin.

LONDON HOSPITALS.

1247. R. Liquoris ammoniæ acetatis, $\text{f.}\mathfrak{z}\text{ss}$
 Aquæ, $\text{f.}\mathfrak{z}\text{iss.}$ M.

Use as a refrigerant lotion.

1248. R. Extracti conii, $\mathfrak{z}\text{ij}$
 Liquoris plumbi subacetatis diluti, $\text{f.}\mathfrak{z}\text{xij.}$ M.

As a cooling and anodyne lotion.

The following are useful lotions :—

1249. R. Ammonii chloridi, $\mathfrak{z}\text{ijss}$
 Camphoræ, $\mathfrak{g}\text{ij}$
 Saponis, $\mathfrak{z}\text{iss}$
 Alcoholis diluti, $\text{f.}\mathfrak{z}\text{v.}$ M.

Immerse a piece of flannel in this solution, and retain it upon the painful joint by means of a bandage.

1250. R. Ammonii muriatis, $\mathfrak{z}\text{ij}$
 Spiriti vini rectificatæ, \mathfrak{ss} $\text{f.}\mathfrak{z}\text{ij.}$ M.
 Aquæ,

An excellent cooling and discutient application in sprains, bruises, orchitis, and local external inflammations generally.

1251. R. Arnicæ floræ, $\mathfrak{z}\text{j}$
 Aquæ bullientis, $\mathfrak{Oj.}$ M.

This preparation is preferable to the tincture of arnica as a vulnerary, as the latter is occasionally followed by eczema.

II. SURGICAL DISEASES.

Cancer—Carbuncles and Furuncles—Carious Teeth—Epistaxis—Fissure of the Anus—Goitre—Hemorrhoids—Hospital Gangrene—Nævi—Necrosis—Orchitis—Ozæna—Prolapsus Ani—Prostatic Enlargement—Pruritus Ani—Spermatorrhœa—Synovitis—Tumors—Ulcers—Varicose Veins.

CANCER.

The therapeutic treatment of cancer has been in three directions, by internal medication, by local external applications, and by injections into the substance of the growth.

Of internal remedies, *conium*, lauded by STÖRCK, of Vienna, still retains the first rank, in spite of theoretical objections to its efficacy. The best preparation is thought by some to be the freshly-prepared *succus conii*. (For formulæ see below.)

Condurango, which has fallen wholly into disfavor in this country, has recently received strong testimony in its support, in cancer of the stomach, from various German physicians.

The *phytolacca decandra* has been praised by some American physicians for its alleged power to prevent the development of cancer. Not only is the fluid extract given internally, but the inspissated juice of the leaves is applied in the form of a plaster at the same time, either alone or combined with chloride of zinc and opium.

Sir BENJAMIN BRODIE used to give his cancerous patients *liq. potassæ*, f.ʒj, thrice daily. Sir JAMES PAGET, in his "Clinical Lectures," says that he also has followed this treatment, often without effect, "but frequently it has given relief from the burning, aching and bursting pains which have been connected with the cancer." Sir

JES considers it indicated in the gouty diathesis, and believes Missisquoi water sometimes does good in a similar manner.

ASTLEY COOPER was wont to attach importance to the exhibition of *ammonia*, especially in uterine cancer. His favorite pre-

PARS:—

- | | | | |
|----------|---------------------------|-----------|----|
| 1252. R. | Sodæ carbonatis, | gr. xxx | |
| | Ammoniæ carbonatis, | gr. v | |
| | Tincturæ calumbæ, | f. ʒj | |
| | Infusi gentianæ composiæ, | f. ʒiiss. | M. |
- This amount to be taken thrice daily.

Dr. WASHINGTON L. ATLEE, of Philadelphia, attaches value to the prolonged and even constant use of *arsenic*. After excision of the cancerous growth this drug would seem to have a retarding influence on its reappearance.

In *cancer of the stomach*, Dr. JAMES T. WHITTAKER, of Cincinnati, has reported apparently successful cases from the administration of *bisulphide of carbon*, gtt. ij–iv, in oil of sweet almonds, three times daily; but the improvement he noted may have been owing to the anæsthetic effect of the remedy.

For injections into the substance of the growth, *dilute acetic acid* has been used with unquestioned success in epithelial cancer. Pure *carbolic acid*, injected underneath the cancerous sore, is said by Dr. BARTHOLOW to limit the extension and retard the growth of the disease.

Dr. HASSE, of Berlin, injects *pure alcohol*, to which one per cent. of ether has been added; this he throws, not into the growth itself, but around its edges, thus obliterating the lymphatics. The injections are repeated once every week or every other week.

Dr. WYNN WILLIAMS, of the Samaritan Hospital, London, employs *bromine*, one part to three of pure alcohol, of which gtt. v–x are injected into the tissues by means of a long syringe with a platinum nozzle. The solution develops heat, and should be prepared some time before used. With it he claims striking success in *uterine epithelial cancer*. Dr. BENJAMIN RHETT, of South Carolina, has also used with success (*Charleston Medical Journal and Review*, October, 1874) the following:—

- | | | | |
|----------|------------|----------|----|
| 1253. R. | Brominii, | gtt. xij | |
| | Alcoholis, | f. ʒj. | M. |
- Inject from four to ten drops into the growth, and touch the surface lightly with it.

DR. MARSDEN, LONDON CANCER HOSPITAL.

This gentleman, after an experience of over six thousand cases of cancer, considers *arsenic* as superior to any other agent in cancer. **He** believes that with early treatment nine out of ten cases may **be cured**. He recommends it in every form of cancer, except the

cystic or colloid varieties—provided that the disease does not exceed four inches square in size—when removal by the knife appears to be the only remedy. Arsenic may be used in this way for cancers in every situation, except the interior of the mouth or nose, localities where the nature of the remedy makes it dangerous. The formula used at the cancer hospital is the following:—

1254. R. Arsenious acid, ʒij
Mucilage of gum acacia, ʒj.

Mix into a paste too thick to run. This is to be spread over the entire surface of the cancer, provided this does not exceed one square inch in size; a bit of dry lint is then placed over the sore, in order to absorb any excess of paste. In the course of an hour the lint becomes dry and hard, and adheres firmly to the parts.

In the course of twenty-four hours some inflammatory action is visible in the tissues immediately adjacent to the cancer. There is often also some pain, but this is not usually severe, and lasts but for a day or two. After the lapse of two or three days, according to circumstances, bread-and-water poultices, changed every few hours, are to be constantly applied over the sore. A distinct line of demarcation is usually to be seen by this time, and the slough gradually separates and comes away, leaving a healthy cup-like depression, varying in depth and size according to the mass removed. Granulation proceeds rapidly, and the case is then treated as a simple ulcer. The slough separates at periods varying from six to thirty days, according to its size. The disease usually comes away entire with the slough; but where this is not the case the paste is to be applied to the remaining portion, as in the first instance, every second or third day, till the desired effect is produced.

MR. C. H. MOORE, MIDDLESEX HOSPITAL, LONDON.

In the article on cancer, by this gentleman, in Holmes' "Surgery," he commends the tinctura ferri chloridi internally. "Iodine, opium, and especially lead, appear the most effective in retarding the growth of the tumor."

1255. R. Plumbi iodidi,
Pulveris opii, ss ʒij
Ferri sulphatis exsiccati, ʒss
Glycerinæ, q. s.

To make a convenient paste. Apply daily to the swelling, so that it will thoroughly moisten the surface.

For tender and painful ulcers, he advises the following:—

1256. R. Fresh stramonium leaves, $\frac{1}{2}$ lb.
Lard, 4 lbs.

Mix with gentle heat for some time, and strain. Spread on cotton-wool and apply to the part.

DR. LANDOLFI, OF NAPLES.

1257. R. Brominii chloridi, ʒiij
Zinci chloridi, ʒij
Antimonii chloridi,
Auri chloridi, ss ʒj
Extracti glycyrrhizæ,
Aquæ, ss q. s.

To make a thick paste. To be applied on small portions of linen to the ulcerated surface.

M. MICHEL, PARIS.

1258. R. Pure sulphuric acid, ʒss
Finely powdered asbestos, q. s.

Make a paste of medium thickness.

This escharotic is said to be efficient in action and not very painful.

The following has been commended by Dr. J. E. NICHOLS (Chicago *Medical Journal*, February, 1875):—

1259. R. Zinci chloridi,
Pulveris sanguinaris, ss q. s.

Rub together in the open air, to form a thick paste.

Of this enough is put on cotton-wool to cover the entire surface of the cancer. After two hours remove it, and apply a light poultice. The next day remove the eschar as much as practicable, and again apply the paste and the poultice. This should be continued until the malignant growth is replaced by healthy granulations.

J. W. BRIGHT, M. D., LEXINGTON, KY.

1260. R. Santali pulveris, ʒj
Zinci chloridi, ʒiij
Podophylli extracti, ʒj
Amyli, ʒj.
Aquæ, q. s.

To form a thick paste. Apply on a piece of cotton cloth, removing once a day for three or four days. Then poultice the part.

LONDON HOSPITALS.

1261. R. Zinci chloridi, ʒiij
Antimonii chloridi, ʒij
Amyli, ʒiv
Glycerinæ, q. s. M.

Powdered opium may be added, to lessen the pain caused by this caustic, which is employed with success to destroy cancerous tumors.

1262. R. Extracti belladonnæ, ʒss
 Acidi hydrocyanici diluti, f.ʒj-ij
 Glycerinæ, f.ʒj
 Aquæ destillatæ, Oj. M.

One fluid ounce of this solution is mixed with from one to three fluid ounces of distilled water, and compresses dipped in this mixture are applied to the cancerous tumors as a soothing lotion.

1263. R. Opii pulveris, ʒj
 Extracti conii, ʒij
 Acaciæ pulveris, q. s. M.

Divide into forty pills. One or two to be given in the evening, to combat the pains of cancer, which cannot be operated on.

1264. R. Conii foliæ,
 Adipis, ss ʒiss. M.

The conium leaves, which should be fresh, are boiled over a slow fire, in the lard, until they become friable, and then filter. This pomade is to be employed in frictions on cancerous tumors, at the same time that stramonium is given internally. If fresh conium leaves cannot be obtained, the pomade may be made with the extract of conium and lard.

CARBUNCLES AND FURUNCLES.

1265. R. Aquæ chlorinii, f.ʒss.

This amount, given three times a day, has been highly commended in furunculous disease by Dr. T. N. WYLLIE, of Texas (*Medical and Surgical Reporter*, May, 1873).

1266. R. Acidi sulphurici diluti, gtt.xx.

This amount to be given in a glass of water three times a day. It is recommended in the *Medical and Surgical Reporter*, 1873, by Dr. MADISON MARSH, as almost a specific in furuncular disease.

PROF. SYDNEY RINGER, OF LONDON.

This excellent authority highly extols, in anthracosis and furunculosis, the internal use of the sulphides, as :—

1267. R. Calcii sulphidi, gr.ʒv.
 This amount in a pill, five or six times daily.

For a local application to carbuncles and abscesses, he has found nothing give greater relief than this :—

1268. R. Extracti belladonnæ,
 Glycerinæ, ss q. s.
 Make an ointment and apply to the part.

M. DE SAVIGNAC, OF PARIS.

In obstinate furunculosis, employs the alternative use of sulphate of soda and arsenic. The latter is pushed to its constitutional effect, while the former is used as an occasional purgative.

1269. R. Tincturæ florum arnicæ, f.ʒj
Acidi tannici,
Acaciæ pulveris, aa ʒss. M.

Paint boils with this every fifteen minutes, till a thick coat is on them, to abort them (Dr. C. B. HALL, *Cincinnati Lancet and Observer*, 1873).

M. CEZARD, PARIS.

This author, in 1874, stated before the Paris Academy of Sciences that malignant pustule should be treated in the commencement by the incision of the eschar, and the application to the seat of the disease of compresses soaked in a $\frac{1}{100}$ solution of iodine and iodide of potassium which will in a short time, have penetrated, by imbibition and absorption, to all parts of the viruliferous tissues, and will thus soon produce a rapid and radical cure. There will be little if any loss of substance. It has been found by experiment that a $\frac{1}{100}$ solution of this liquid will soon destroy the virulence of anthracose fluids without the organism, and a much weaker solution can prevent and even destroy its virulence within the organism.

DR. JAMES T. HEADY, OF KENTUCKY.

Make a crucial incision about one line in depth, at right angles, entirely across the discolored parts, where death or partial death has taken place. Into these incisions, along their entire extent, apply some finely-powdered corrosive chloride of mercury. The quantity in no case must exceed one-half grain, otherwise disagreeable or dangerous results may follow. After the incision and the application of the chloride, a poultice, or resin cerate on lint, should cover the parts affected. Within twenty-four hours afterward a complete line of demarcation will have been formed, and the parts within that line will be insensible, hard, dry, and resembling rotten wood. The slough will separate in a few days, leaving a healthy granulating surface.

Some physicians have reported benefit from:—

1270. R. Potassæ permanganatis, gr. xxx
Aquæ destillatæ, f.ʒj. M.

Use as a dressing.

PROF. S. D. GROSS, PHILADELPHIA.

Wash the neck thoroughly every night, with warm water and soap, and rub well in—

1290. R. Unguenti hydrargyri biniodidi, ʒj
Cerati simplicis, ʒvj. M.

The patient should also take, internally, liquor iodinii compositus, gtt.viij, in sweetened water, thrice daily.

PROF. J. M. DA COSTA, PHILADELPHIA.

1291. R. Cadmii iodidi, ʒj
Cerati simplicis, ʒj. M.

Apply, by thorough friction, every other day.

DR. LUTON, OF RHEIMS, FRANCE.

1292. R. Acidi iodidi, ʒj
Aquæ destillatæ, f.ʒss. M.

Inject eight to ten drops in the substance of the tumor, from time to time.

DR. FRIEDERICH OESTERLEN, TUBINGEN.

1293. R. Brominii, gtt.xij-xx
Adipis, ʒj
Olei limonis, gtt.x. M.

Rub thoroughly over the swelling, from time to time.

HEMORRHOIDS.

PROF. D. HAYES AGNEW, M. D., PHILADELPHIA.

1294. R. Tincturæ kramerisæ, f.ʒj
Mucilaginis ulmi, f.ʒij. M.

For two injections; one to be thrown up morning and night, in ulcerated hemorrhoids.

1295. R. Zinci sulphatis, gr.iv
Aquæ carbolicæ, f.ʒij. M.

For a wash in external hemorrhoids.

PROF. FORDYCE BARKER, M. D., NEW YORK.

The general prejudice against aloes in piles does not apply, according to this writer, to their occurrence in pregnant women. A frequent prescription with him is:—

1296. R. Pulveris aloës socotrinæ, ad. ʒj
Saponis castiliensis, ʒss
Extracti hyoscyami, ʒss
Pulveris ipecacuanhæ, gr.v. M.

To make twenty pills. One morning and evening.

When the tumors descend they should be replaced, and the following applied twice daily:—

- | | | | |
|----------|------------------------------|-------|----|
| 1297. R. | Unguenti gallæ compositæ, | ℥j | |
| | Extracti opii aquosi, | ℥j | |
| | Liquoris ferri persulphatis, | f.℥j. | M. |

Dr. BARKER considers castor oil one of the most irritating laxatives to hemorrhoids.

WILLIAM ALLINGHAM, F. R. S., LONDON.

The bowels should be kept soluble with the following:—

- | | | | |
|----------|-------------------------------|------------|----|
| 1298. R. | Liquoris magnesiæ carbonatis, | ℥ss | |
| | Potassæ bicarbonatis, | ℥j | |
| | Tincturæ sennæ, | f.℥ij | |
| | Spiritus ætheris nitrosi, | f.℥ss | |
| | Aquam, | ad. f.℥ij. | M. |

To be taken in the morning, fasting.

The parts to be smeared with—

- | | | | | |
|----------|----------------------|----|------|----|
| 1299. R. | Extracti belladonnæ, | ss | ℥ss. | M. |
| | Extracti opii, | | | |
- Followed by a warm poultice, if there is much swelling.

In *internal bleeding piles*, Mr. ALLINGHAM strongly recommends the curative powers of persulphate of iron. This may be applied in the fluid form, as:—

- | | | | |
|----------|---------------------|----|-----------|
| 1300. R. | Ferri persulphatis, | ℥j | |
| | Glycerinæ, | | |
| | Aquæ, | ss | f.℥ss. M. |

Or as an ointment:—

- | | | | |
|----------|---------------------|-------|----|
| 1301. R. | Ferri persulphatis, | ℥ss-j | |
| | Unguenti cetacei, | ℥j. | M. |

This, if carefully applied, causes no pain.

PROF. GREENSVILLE DOWELL, M. D., TEXAS.

- | | | | |
|----------|--------------------|-------|----|
| 1302. R. | Plumbi acetatis, | ℥j | |
| | Morphiæ sulphatis, | gr.ij | |
| | Argenti nitratis, | ℥j | |
| | Cerati simplicis, | ℥j-ij | M. |

Apply a small portion at night, after bathing, and replace the piles. A very successful formula.

PROF. G. T. ELLIOTT, M. D., NEW YORK.

1303. R. *Magnesiæ sulphatis*,
Magnesiæ carbonatis,
Sulphuris precipitati,
Sacchari lactis, aa ʒss
Pulveris anisi, ʒij. M.

One to two teaspoonfuls at bedtime. An excellent saline laxative in hemorrhoids.

PROF. ROBERTS BARTHOLOW, CINCINNATI.

1304. R. *Pulveris aluminis*, ʒij
Pulveris camphoræ,
Pulveris opii, aa ʒi
Unguenti, ʒj. M.

Apply to protruding, bleeding and painful piles.

English authorities advise, in addition to the local treatment, the patient to take internally a drachm of the confection of black pepper twice daily.

The following formulæ are applicable to various complications with hemorrhoids:—

1305. R. *Aluminii et potassii sulphatis*, ʒij
 Fresh and well-washed butter, ʒj
 Dissolve the sulphate of aluminum and potassium in a little water, and incorporate it with the butter. Grease the hemorrhoidal tumors with this ointment morning and evening.

1306. R. *Gallæ pulveris*, ʒiv
Unguenti benzoini, ʒj. M.
 Useful in hemorrhoids which bleed easily. When the tumors are painful, a half drachm of powdered opium may be added to the ointment.

1307. R. *Acidi tannici*, ʒss
Unguenti benzoini, ʒij
Ceræ albæ, gr.vij
Butyri cocoæ, ʒiv. M.
 Divide into ten suppositories for hemorrhoidal hemorrhages.

1308. R. *Extracti krameriæ*, gr.vij
Morphiæ muriatis, ʒss
Stearinæ, ʒij. M.
 For one suppository in painful hemorrhoids.

1309. R. *Extracti opii*,
Extracti stramonii, aa gr.iss-ij
Butyri cocoæ, ʒij. M.
 Divide into two suppositories. One to be introduced into the rectum at bedtime, to relieve the pain caused by hemorrhoids. Oily enemata and rest.

1310. R. Antimonii et potassii tartratis, gr. 4-ij
Butyri coccos, Div. M.
For one suppository, to recall the hemorrhoidal flux. Aromatic fumigations and warm hip-baths should assist the treatment.
1311. R. Pulveris iodoformi, gr. xx
Butyri coccos, 3j. M.
Make six suppositories. Excellent in tenesmus from painful hemorrhoids.

HOSPITAL GANGRENE.

PROF. JOSEPH JONES, M. D., OF LOUISIANA.

The following formula has proved useful in hospital gangrene, and other diseases of an asthenic typhoid character:—

1312. R. Tincturæ ferri chloridi, f. 3j
Potassæ chloratis, 3iv
Quinise sulphatis, 3ij
Acidi hydrochlorici, f. 3j
Aquæ destillatæ, f. 3ij.

Dissolve the chlorate in the water, add the hydrochloric acid, then dissolve in this mixture the quinine, and finally add the iron. Thirty to sixty drops, in water, three or four times a day.

Such a mixture should not be continued for more than two weeks. In place of it the following is of great value in gangrenous and ill-conditioned wounds:—

1313. R. Ferri et potassæ tartratis, 3j
Acidi tartarici, 3ij
Quinise sulphatis, 3ij
Aquæ destillatæ, f. 3xij.

Dissolve the acid in the water, add the quinine, and last the iron. Shake well before using. A tablespoonful in a wineglassful of water, thrice daily.

When the iron seems too astringent, the following combination is valuable:—

1314. R. Strychnise sulphatis, gr. ij
Quinise sulphatis, 3ij
Ferri redacti, 3ij
Extracti rhei, 3ij. M.

Make one hundred pills. One three times a day.

When there are signs of syphilis or scrofula present, the following

fills the important indication of acting both as a tonic and alterative:—

1315. R.	Syrupi ferri iodidi,	f. 3j
	Tincturæ iodinii,	f. 3ij
	Potassii iodidi,	3ij
	Syrupi zingiberis,	f. 3vj
	Aquæ destillatæ,	f. 3j.

Dissolve the iodide of potash in the water, add the tincture of iodine, and then mingle with the syrups of iodide of iron and ginger. A teaspoonful in a wineglassful of water three times a day.

As a local application the liberal and thorough application of fuming nitric acid proved most successful in the Confederate service.

SURGEON MIDDLETON GOLDSMITH, U. S. A.

This surgeon recommended as the most efficient local application—

1316. R.	Brominii,	f. 3j	
	Potassii bromidi,	3ij	
	Aquæ destillatæ,	ad. f. 3iv.	M.

To apply to the part as a lotion.

The pure bromide, as a cauterant to the gangrenous surface, proved most efficient in the Federal hospitals.

DR. A. NETTER, OF RHEIMS.

This surgeon, following DUPUYTREN, has found *camphor*, early applied and in large quantities, in the form of a powder, a "sure cure" for hospital gangrene and phagadenic chancres.

PROF. ROBERTS BARTHOLOW.

This writer considers *oleum terebinthinæ* the most efficient application in hospital gangrene. The mortified parts are first removed with the scissors, and the oil is applied directly to the diseased surface by means of a piece of cotton cloth. The sloughing and feter are checked, and but little pain attends the application.

NÆVI.

In the cure of nævus, the means at our disposal may be divided into two classes: first, those by which a scar is avoided; and secondly, those which necessarily leave a cicatrix of greater or less magnitude. The first class aim at the destruction of the texture of the nævus, or the coagulation of the blood which it contains, by agents which can be introduced through minute punctures of the skin. The means used are the injection of coagulating fluids, the introduction of setons, the subcutaneous ligature, electrolysis, and the galvanic cautery. Electrolysis, the other method referred to, may be performed in two ways, viz., with and without insulation of the electrodes. With perseverance, the latter is an efficient means. But local injections are much more convenient.

Prof. LISTER advises repeated injections of *acidi carbolici*, *m.v.* Dr. BIGELOW, of Boston, uses—

1317. R.	<i>Argenti nitratis,</i>		
	<i>Aquæ destillatæ,</i>	ss	gtt. iij-vj. M.
For injection.			

Dr. DE SMET, of Brussels, has found that small nævi may often be dispersed by tattooing with croton oil.

Dr. HENRY G. PIFFARD, of New York, expresses the opinion that in the capillary nævus, or "wine-mark," probably the best method of treatment is to paint lightly the surface, or a part of it, if large, with nitric acid. When the cauterized epidermis exfoliates, the nævus should be found to have slightly diminished. The application can then be repeated. It should be done by means of a small probe, around the end of which a little cotton has been wrapped.

In this form of nævi, however, the treatment advocated by Mr. BALMANO SQUIRE, of London, is preferable. He scarifies the affected skin with a series of short incisions, about one-sixteenth of an inch apart, to the depth of nearly dividing the *cutis vera*. Interposing a piece of white blotting paper, he exercises gentle pressure with the finger for about ten minutes. This checks the bleeding. In a fortnight the surface is healed. If necessary, the operation may then be repeated.

NECROSIS.

MR. POLLOCK, OF LONDON.

The plan proposed by this surgeon (*Lancet*, May, 1870) in caries and necrosis, and successfully carried out by others, is to expose the diseased bone and apply to it, with a glass brush, a solution of equal parts of sulphuric acid and water; or, a lotion of one part of the strong acid to six of water is kept in constant contact with the part by means of pieces of lint saturated with it. The strength of the acid is gradually raised until it is applied pure.

Dr. EPHRAIM CUTTER, of Cambridge, Mass., has succeeded with a modified form of this treatment, injecting the diseased cavity with the following solution, at first twice a day, afterward once a day:—

1318. R. Acidi sulphurici aromatici, f.ʒj
Aque destillatæ, f.ʒj. M.

Numerous observers have testified to the great value in such diseases of what is known as "Villate's solution":—

1319. R. Liquoris plumbi subacetatis, f.ʒiv
Zinci sulphatis, aa ʒij
Cupri sulphatis, f.ʒxxvj. M.
Aceti vini albi,

This should be used diluted, one part to ten of water, and applied to the part once or twice daily, by means of a sponge and bandage, or injected with a syringe. The solution, when properly made, has a light-green, opaque color. Wine vinegar, not cider vinegar, must be used in preparing it.

Prof. ANDREWS, of Chicago, has obtained excellent results in some cases of carious bones by injecting them thoroughly, through the orifices of the wound, twice daily, with a solution of carbolic acid, ten grains to the ounce.

Of course, whatever local treatment is adopted, it must be backed by tonics, rest, nutritious food, bathing and hygienic surroundings. The internal administrations of the phosphates have been supposed, by some, to hasten the formation of healthy bone.

ORCHITIS.

MR. GEORGE COWELL, LONDON.

The scrotum over the inflamed gland is wet, and the solid nitrate of silver is equably applied over the whole testicle. A suspensory bandage and rest are enjoined. Pain disappears in from two to six hours, and in a few days the patient is well. Of course, such general treatment as is needed is ordered (*Practitioner*, February, 1872.)

MR. H. G. KNAGGS, ENGLAND.

This gentleman, in the *British Medical Journal*, November, 1875, reports a method of treating orchitis which, he says, he has for many years found very effective. It consists in the more or less constant application, while the patient is resting, of a lotion of tincture arnica and water (one part of the former to six of the latter) to the affected organ; secondly, in rubbing in an embrocation composed of one-third, or even one-half, tincture of arnica and soap-liniment, two or three times a day, along the course of the spermatic cord; and thirdly, in the internal administration of seven-drop doses of tincture of arnica, combined, when there is febrile disturbance, with two-and-a-half-drop doses of Fleming's tincture of aconite and acetate of ammonia. This simple treatment, he says, generally cures the patient in a fortnight or less.

MR. C. H. MOORE, M. R. C. S., MIDDLESEX HOSPITAL, LONDON.

The testicle is first immersed in water as hot as can be borne, and kept in it from ten to fifteen minutes, immediately to be followed by a stream of cold water poured over it from a height for five minutes. The latter causes a certain amount of itching pain, and, by contracting the dartos, corrugates the scrotum, speedily diminishing the size of the testicle, with subsidence of the inflammation and pain, the patient experiencing relief in a very short time. The hot and cold water may have to be repeated two or three times a day for a few days; but frequently the patient is so far recovered in the course of four-and-twenty hours as to be able to follow his usual avocation without any inconvenience, requiring no further treatment beyond the continuance of the suspensory bag.

PROF. RICORD, OF PARIS.

1320. R. Emplastri hydrargyri,
 Extracti conii, ℥ss 3ijss
 Extracti opii, gr.xv. M.
 Spread on a piece of leather of convenient size, and apply in case of
 orchitis or subacute bubo.

PROF. DIDAY, OF LYONS.

1321. R. Extracti belladonnæ, ℥ss
 Tincturæ iodinii, f.3jss. M.
 Moisten the extract with fifteen to twenty drops of water, and add the
 tincture. Spread on the skin by a camel's-hair pencil.

In consequence of its adhesion to the skin, it acts more effectually
 than an ointment. It is particularly useful in the treatment of
 epididymitis when the acute inflammation has been appeased by
 bleeding and baths.

OZÆNA.

Syphilitic, scrofulous and traumatic ozæna must be treated
 etiologically. But a common form is the simple or idiopathic, un-
 connected with any perceptible vice of the system. For this the
 treatment is threefold—1. Lavation, with the nasal douche, using
 simple, saline, slightly alkaline, or antiseptic fluids. 2. Inhalation.
 3. Insufflation.

PROF. A. TROUSSEAU, PARIS.

1322. R. Hydrargyri chloridi mitis, gr.xx
 Hydrargyri oxidi rubri, gr.x
 Sacchari albi, 3ss. M.
 To be used for insufflation, three times a day.
1323. R. Subnitrate of bismuth,
 Powdered talc, equal parts.
 As a snuff.

Other authors commend the insufflation of iodoform.
 For medicated douches:—

1324. R. Sodæ phosphatis, 3ss
 Aquæ destillatæ, f.3viij. M.
 Used to loosen the crusts and viscid secretion.

1325. R. Potassæ permanganatis, ʒj
Aquæ destillatæ, ʒj. M.
To correct the fetor.

Dr. WETZLER advises creasote, ʒj to cerate ʒj, applied to the inner membrane daily, with a camel's-hair brush.

DR. SOBRIER, OF FRANCE.

1326. R. Bismuthi subnitratæ, ʒss
Sulphuris iodidi, ʒviij
Pulveris glycyrrhizæ, ʒj. M.
For a snuff in osæna and chronic nasal catarrh. From ten to fifteen pinches a day should be used.

As a lavation with the nasal douche, we may use salt water, or, what is still better, salt milk (salt ʒj, milk ʒj), feeble antiseptic washes, etc. They should be used *freely*, a gallon at a time.

PROLAPSUS ANI.

PROF. JOHN CLELAND, GALWAY.

1327. R. Liquoris bismuthi et ammoniæ citratæ
(Br.), f.ʒss
Amyli solutionis, f.ʒij. M.
Use as an enema in prolapsus ani. It should be given after the patient is in bed, and the bowel returned.

Another:—

1328. R. Tincturæ ferri chloridi, f.ʒj
Aquæ destillatæ, f.ʒj. M.
To be divided into five injections. One to be thrown up the rectum three times daily.

PROF. VON LANGENBECK, OF BERLIN.

This eminent surgeon states that he has treated prolapsus ani "with astonishing success" by hypodermic injections of a solution of ergotin (five to fifteen parts to one hundred of distilled water). He replaces the bowel, and inserting the point of the syringe about three centimètres in depth in the cellular tissue, throws in from one to two grains of ergotin. This should be repeated every three or four days for three or four weeks, any hard fecal masses in the bowels being first removed by a simple injection.

PROSTATIC ENLARGEMENT.

DR. F. MAGENDIE, PARIS.

As *enlargement of the prostate* is a so frequent and annoying affection, which does not admit of cure by the knife, our attention is the more drawn to therapeutic measures. Dr. MAGENDIE believes that muriate of ammonia has a decided effect in reducing the gland. He gives—

1329. R. Ammonii chloridi, ℥j
 Extracti conii, gr.ij. M.
 This amount, in any appropriate vehicle, thrice daily.

MR. R. A. STAFFORD, F. R. C. S., LONDON.

This surgeon believes that he has succeeded in diminishing simple prostatic hypertrophy by the use of—

1330. R. Potassii iodidi, gr.ij-iv
 Extracti hyoscyami, gr.v-vij. M.
 Make a suppository. One every night.

When the urine is acid, the liquor potassæ or other alkali should be administered to restore its alkalinity.

Later writers speak highly of suppositories of *iodoform*. Prof. BARTHOLOW remarks, "the iodoform diffuses into the neighboring organs, and acts directly upon them."

PROF. S. D. GROSS, M. D.

If the patient is plethoric, apply leeches to the perineum, and unload the bowels by saline purgatives (sulphate of magnesia or bitartrate of potassa). Condiments and alcoholic drinks must be renounced, also horseback exercise and venery. The patient must seek the horizontal position, wear flannel next the skin, and avoid exposure to cold.

DR. WASHINGTON L. ATLEE, PHILADELPHIA.

1331. R. Fluidi extracti ergotæ, gtt.xx.
 This amount is to be given at first every four hours, its action being supplemented by the use of the catheter twice daily, until the patient regains entire control of the bladder. As this is restored, the frequency of the dose is generally reduced to a single administration, at bedtime.

This treatment has been very successful.

PROF. HEINE, INNSBRUCK, GERMANY.

1332. R. Potassii iodidi, $\mathfrak{z}\text{ij}$
 Tincturæ iodidi, $\text{f.}\mathfrak{z}\text{ij}$
 Aquæ destillatæ, $\text{f.}\mathfrak{z}\text{vj}$. M.

Of this solution, twelve to twenty drops are to be thrown into the substance of the gland, to a depth of two lines, the operation to be repeated every seven or fourteen days.

Great care is required to avoid parenchymatous suppuration.

PRURITUS ANI.

WILLIAM ALLINGHAM, F. R. S., LONDON.

The patient should renounce coffee, spirits, condiments and rich food. The parts should be washed at night with warm water and yellow soap. The bowels should be kept soluble with gentle salines. On retiring, the following ointment should be applied freely:—

1333. R. Hydrargyri chloridi mitis, $\text{gr.}\text{x}$
 Unguenti sambuci, $\mathfrak{z}\text{j}$. M.

Or this lotion:—

1334. R. Sodæ boratis, $\mathfrak{z}\text{ij}$
 Morphiæ muriatis, $\text{gr.}\text{xvj}$
 Acidi hydrocyanici diluti, $\text{f.}\mathfrak{z}\text{ss}$
 Glycerinæ, $\text{f.}\mathfrak{z}\text{ij}$
 Aquam, $\text{ad. f.}\mathfrak{z}\text{viij}$. M.

SPERMATORRHŒA.

PROF. S. D. GROSS, OF PHILADELPHIA.

1335. R. Elixir cinchonæ, $\mathfrak{z}\text{iss}$
 Acidi nitrici diluti, $\text{gtt.}\text{viij}$
 Strychniæ sulphatis, $\text{gr.}\frac{1}{16}$. M.

This quantity to be taken three times daily.

Also,

1336. R. Morphiæ sulphatis, $\text{gr.}\frac{1}{4}$
 Butyri cocœ, q. s. M.

For a suppository, to be introduced into the bowels at bedtime.

If there is a morbid sensibility of the urethra and prostate, some

tive, a dressing of balsam of Peru is applied, and over that straps and bandage.

Various older surgeons have spoken of the excellent effects of *oleum terebinthinæ* as a stimulant to old ulcers, and it has fallen into undeserved neglect. The surface should be freely painted with it, and lint, wet with it, may be laid upon the ulcerated surface.

DR. BOURGUIGNON, PARIS.

The external use of the tartrate of iron and potash is praised by this writer. He finds that in chronic wounds generally, and especially in varicose ulcers of the leg, with hard, well-defined edges and unhealthy surfaces, this substance acts beneficially, generally effecting a cure in two or three months. He uses a solution of from two to six parts of the salt in one hundred of distilled water, a few drops of ammonia being added to prevent precipitation. Pledgets of fine charpie soaked in this are applied to the ulcer night and morning, and covered over with a thick layer of cerate.

The following formulæ have been commended :—

1357. R. Chlorali hydratis, gr.xvj-3ss
Aque destillatæ, f.3iv. M.
As a local application to ulcers.

1358. R. Olei cadini, f.3j
Pulveris calcis sulphatis, 3vj. M.
To be thinly spread on dressings for ulcers, where the suppuration is profuse.

MR. PHILIP COWEN, M. R. C. S. L., LONDON.

1359. R. Farinæ (wheat flour), 3iv
Acaciæ pulveris, 3j
Tragacanthæ pulveris, 3ss
Ovi, No.j
Cretæ, 3ij
Aque frigidæ, Oj.
Mix and heat to boiling; boil one minute, and cool. It should be thin enough to spread with a brush.

The patient, provided with a pot and brush, paints the ulcer with this three or four times daily, covering it, when done, with a soft rag. Mr. COWEN claims very good results from this (*Lancet*, January, 1873.)

ROBERT DRUITT.

1360. R. Creasoti, gtt.xx
Unguenti resinæ,
Adipis, aa 3j. M.
A good stimulating application in indolent and sloughing ulcers and hemorrhoids.

Much praise has of late been accorded to *iodoform* in obstinate and irritable ulcers. Its objection is its penetrating and unpleasant smell. Dr. GUBLER, of Paris, uses the formula :—

1361. R. Iodoformi, gr.xv
Ætheris, f.ʒj. M.

In consequence of the rapid volatilization of the ether, the iodoform is reduced to a state of extreme tenuity and covers the surface in a uniform manner.

DR. PARETA, OF PALERMO, ITALY.

1362. R. Iodoformi, ʒj
Alcoholis, f.ʒss
Glycerinæ, f.ʒiv. M.

Wash the ulcers daily with this, and then dust them liberally with iodoform in fine powder.

Iodoform is certainly an admirable local anæsthetic. It may be advantageously used as an ointment, ʒij-iv to lard ʒj.

The same teacher, and others, have also experimented satisfactorily with *pepsin* in obstinate phagedenic and cancerous ulcers. His formula is :—

1363. R. Pepsinæ, ʒss
Acidi lactici, ʒj
Aquæ, f.ʒiiijss. M.

Use as a local application to the ulcer.

This, he states, has succeeded after numerous other vaunted remedies had failed.

DR. COMEGYS PAUL, OF PHILADELPHIA.

This writer (*Medical Times*, November, 1875) directs attention anew to ordinary commercial *petroleum*, as an inexpensive and efficient antiseptic and stimulating application to ulcerous and suppurating surfaces. He has found the petroleum to be most useful as an application to non-specific sluggish ulcers, and to all suppurating wounds that have a tendency to heal with an unhealthy and easily-ruptured cicatrix.

As an injection in sinuses, either connected or unconnected with diseased bone, the result will be satisfactory. In a bone-sinus it can be used without interruption, materially diminishing the discharge.

It is valuable in all inflammations of an erysipelatous character, being applied like an ordinary fomentation. The spreading of the disease is, apparently, favorably influenced, and the duration shortened in many cases.

Wounds dressed with petroleum should be thoroughly cleansed, then covered with saturated lint, and, where there has been deep-seated destruction of the tissues, charpie fully impregnated with it should be packed into the cavities, and the whole overspread with oiled silk, waxed paper, or a piece of muslin spread with lard.

The smell is not at all oppressive, and does not cling to the fingers after ablution.

VARICOSE VEINS.

PROF. A. D. VALLETTE, OF LYONS.

This author has employed the following:—

1364. R.	Iodinii,	gr. xv	
	Acidi tannici,	3ss	
	Aquæ destillatæ,	f. 3xvj.	M.

For local injection.

During the operation, a bandage is applied tightly round the limb above the vein to be operated on, and this is not to be removed for three hours after, for fear of embolism. The "iodo-tannic" solution is injected to an amount varying from ten to twenty-five drops. The effect is to cause immediate coagulation of the blood at the part acted on. At first there is no pain, but after a few hours a severe burning sensation sets in, and the vein begins to inflame slightly in each direction. This never reaches any serious degree, but it is sufficient to cause obliteration for some distance above and below the spot injected. The author states that there is no fear of embolism. He has operated in more than two hundred cases without any accident, and he has found the results much more permanent and complete than after any other operation.

DR. VOGT, OF BERLIN.

1365. R.	Ergotæ extracti aquosæ,	3ü	
	Alcoholis,		
	Glycerinæ,	aa	3j. M.

A syringe of the mixture injected in the vicinity of the varix.

DR. LINON, VERVIERS, FRANCE.

This writer claims much success in the treatment of varicose veins by swathing the leg in a flannel compress wet with a solution of iron in water, forty-five grains to the ounce, and applying a roller flannel bandage over it firmly. This is to be repeated daily for a week or two.

III. THE EYE AND EAR.

THE EYE.—*Blepharitis—Conjunctivitis, Acute, Chronic, Membranous, Gonorrhœal—Corneal Ulcer—Corneal Opacity—Granular Lids—Hyperæmia—Iritis—Keratitis—Stye—Wounds and Injuries.*

THE EAR.—*Acute Otitis—Otorrhœa.*

BLEPHARITIS.

MR. ROBERT BRUDENELL CARTER, F. R. C. S., LONDON.

The treatment should be commenced by removing the crusts by a warm alkaline lotion (sodæ bicarbonatis gr.v, aquæ f.3j), and then apply an astringent ointment, preferably that advised by Prof. PAGENSTECHER, of Wiesbaden, containing the yellow oxide of mercury:—

PAGENSTECHER'S OINTMENT.

1366.	R.	Hydrargyri oxidi flavi,	gr. xxx	
		Olei olivæ,	f. 3ij	
		Adipis,	3j.	M.

If the disease resists this, the parts may be touched with a stick containing one-fourth part of nitrate of silver, or with liquor potassæ.

CONJUNCTIVITIS.

ACUTE CONJUNCTIVITIS.

DR. MARTIN F. COOMES, LOUISVILLE.

This ophthalmologist severely condemns (*Medical and Surgical Reporter*, August, 1875) the use of nitrate of silver in acute conjunctivitis (catarrhal ophthalmia). Out of over ninety cases he had treated by simpler means, not one resulted in the least impairment of vision. In purulent cases, he cleansed the eye frequently with

warm water and collyria of alum, gr.ij to water f.℥j. When the discharge commenced to diminish, a solution of sulphate of copper, from ten grains to the ounce, to a saturated solution, was applied to the everted lid once every two or three days. The early stages of the milder forms were treated with—

1367. R. Sodæ boratæ, gr. x
Aquæ camphoræ, f.℥j. M.
Apply every hour or two.

In later stages, a weak solution of sulphate of copper, or—

1368. R. Acidi tannici, gr. iij-x
Aquæ, f.℥j. M.

MR. GEORGE LAWSON, F. R. C. S., LONDON.

In the treatment of *acute conjunctivitis* (catarrhal ophthalmia), this author recommends that, every two or three hours, or oftener, if the case be a severe one, the eyes be bathed with one of the following lotions, being careful at each application to permit a small portion to flow into the eyes:—

LOTIO ALUMINIS.

1369. R. Aluminis, gr. vj
Aquæ destillatæ, f.℥j. M.

LOTIO ALUMINIS MITIOR.

1370. R. Aluminis, gr. iv
Aquæ destillatæ, f.℥j. M.

LOTIO ALUMINIS CUM ZINCI SULPHATE.

1371. R. Aluminis, gr. iij
Zinci sulphatis, gr. j
Aquæ destillatæ, f.℥j. M.

Cold water should be employed between the times of these applications, to keep the eyes free from the discharge.

A solution of nitrate of silver (gr. j-ij to the ounce) is useful, particularly when there is chemosis of the conjunctiva and swelling of the lids. Two or three drops of this should be dropped into the eye twice a day.

In chronic and purulent cases, he recommends as local applications, when there is any extra secretion present, stimulating drops or lotions, such as what he terms his

GUTTÆ ARGENTI NITRATIS.

1372. R. Argenti nitratis, gr. j
Aquæ destillatæ, f. ʒj. M.

GUTTÆ ZINCI SULPHATIS.

1373. R. Zinci sulphatis, gr. j-ij
Aquæ, f. ʒj. M.

These solutions should be dropped into the eye twice a day.

If there be no abrasion of the cornea, the following lotion will be useful :—

1374. R. Plumbi acetatis, gr. ij
Acidi acetici diluti, m. ij
Aquæ destillatæ, f. ʒj. M.

At night, if there be much secretion from the Meibomian follicles, the tarsal edges of the lids should be anointed with

UNGUENTUM HYDRARGYRI NITRATIS DILUTUM.

1375. R. Unguenti hydrargyri nitratis, ʒj
Unguenti cetacei, ʒj. M.

Stimulating applications should not be made to the eye when there is much photophobia, for they then fail to do good, and are apt to act as irritants.

PROF. GUNNING S. BEDFORD, NEW YORK.

1376. R. Hydrargyri chloratis corrosivi, gr. j
Ammonię muriatis, gr. ʒv
Aquæ destillatæ, f. ʒvj. M.

Make a solution.

For *purulent ophthalmia in new-born infants*, the eyes to be washed with the solution several times during the day. The applications should not be confided to the nurse; they should be made by the practitioner himself, as follows: The child being placed on its back, resting in the lap of the nurse, the practitioner placing its head on his knee, with a soft sponge, moistened with tepid water, cleanses the eyes. The lids are then gently separated, and after everting them, the accumulated matter is removed, and the collyria applied.

It may become necessary to touch the inflamed conjunctiva, by means of a camel's-hair pencil, with the following solution once a day :—

Dr. ROGERS has proved the efficiency of this treatment in numerous cases of gonorrhœal conjunctivitis, with chemosis, great swelling of the lids, profuse purulent discharge, photophobia, etc. A week generally suffices for a cure.

CORNEAL OPACITIES.

MR. C. MACNAMARA, F. R. C. S., LONDON.

This writer believes that, for the nebula and haziness resulting from chronic granular conjunctivitis, *tannic acid*, dusted into the afflicted eye once or twice a day, affords the patient a better hope of relief than any other treatment. In the Westminster Ophthalmic Hospital, of which he is surgeon, is used, in cases of nebula and corneal opacities—

1379. R.	Oxide of zinc,			
	Armenian bole,	ss	ʒij	
	Olive oil,		f.ʒiv	
	Ammoniated mercury,		ʒj	
	Lard,		ʒiv.	M.

MR. T. HOLMES, LONDON.

The opacity of the cornea remaining after keratitis may often be greatly benefited by injecting under the conjunctiva (after all inflammatory action has ceased) a solution of common salt:—

1380. R.	Sodii chloridi,	gr. x	
	Aquæ destillatæ,	f.ʒj.	M.

A few drops to be injected under the conjunctiva once a fortnight.

The treatment by *tattooing* remains as a last resort to remove the disfigurement.

CORNEAL ULCER.

DR. JOHN GREEN, ST. LOUIS.

Dry calomel, in impalpable powder, dusted in very minute quantity into the eye once a day, is a highly valued remedy in the healing stage of corneal ulcers. Pagenstecher's ointment (see Formula 1366) answers well in cases which require stronger stimulation.

1420. R. Tincturæ cantharidis, f.ʒj
 Olei ricini, f.ʒss
 Purified beef marrow, ʒj
 Spiritūs amygdalæ amaræ
 Spiritūs limonis, aa gtt.xij. M.
- To be rubbed, morning and evening, on the scalp.

1421. R. Olei tigllii, mxx-xxx
 Olei amygdalæ dulcis, f.ʒss. M.
- Shave the head, and rub this pomade on the scalp twice a day, until an eruption is produced.

1422. R. Tincturæ iodidi, f.ʒiss
 Extracti hyoscyami, Div
 Beef marrow, ʒj
 Spiritūs bergamii, q. s. M.
- To be rubbed on the scalp, morning and evening, when falling of the hair takes place after a confinement or a serious illness. In addition, preparations of iron, bark, and in some cases of arsenic, are to be given internally.

MR. ERASMUS WILSON, LONDON.

1423. R. Tincturæ cantharidis, f.ʒiss
 Spiritūs rosmarini,
 Spiritūs lavandulæ, aa gtt.x.
 Eau de cologne, f.ʒiss. M.
- Rub gently the scalp with a piece of flannel dipped in this mixture, in order to stimulate the growth of the hair.
1424. R. Tincturæ cantharidis, f.ʒj-ij
 Cupri acetatis, gr.ij
 Olei amygdalæ dulcis,
 Olei ricini, aa f.ʒvj
 Spiritūs lavandulæ, to perfume. q. s. M.
- Apply every evening a small quantity of this liniment to the roots of the hair, in order to prevent them from falling, and to stimulate their growth.

ECZEMA.

DR. L. DUNCAN BULKLEY, NEW YORK.

This author states (*Transactions American Medical Association* 1875) that acute eczema can seldom be abated by soothing treatment only. For this purpose which on evaporating leave a finely-divided powder—
 e. g. :—

1383. R. *Ætheris*, f.ʒij-iv
Spiritus rosmarinæ, f.ʒiv. M.
 To be used in the same manner as F. 1382, but in smaller quantity,
 especially if the skin be delicate and susceptible.

The best *astringent lotions* are the following:—

1384. R. *Zinci sulphatis*, gr.ij-iv
Aquæ destillatæ, f.ʒiv-vj. M.

1385. R. *Plumbi acetatis*, gr.ij-iv
Aquæ destillatæ, f.ʒiv-vj. M.

The above are to be applied by saturating a piece of lint with the solution, and laying it over the eyelids for fifteen or twenty minutes, several times a day, allowing a few drops to enter the eye.

In chronic cases of hyperæmia these applications must give place to weak *collyria*, such as—

1386. R. *Cupri sulphatis*, gr.ij-ij
Aquæ destillatæ, f.ʒj. M.

1387. R. *Argenti nitratis*, gr.ij-ij
Aquæ destillatæ, f.ʒj. M.

A drop or two of one of these collyria is to be applied to the conjunctiva.

IRITIS.

MR. ROBERT BRUDENELL CARTER, F. R. C. S., LONDON.

On the treatment of iritis this author says the first principle to be borne in mind is to *avoid all irritants*, such as astringents, nitrate of silver lotions, etc. The eyes should be given complete functional rest, and, to prevent adhesions, the cardinal point is the use of atropine, which should never be omitted, save in excessively rare cases where it produces local inflammatory action. A four-grain solution should be applied at intervals of an hour till complete dilatation is obtained, and this should be kept up, by a single drop of the solution night and morning. When the atropine from any cause fails to dilate the eye fully, *the use of mercury is imperative*, pushed as rapidly as possible to its constitutional action, as shown by the slight mercurial line on the gums. This should be maintained until the resolution of the inflammation is accomplished.

But the condition of "salivation" should never be brought about designedly.

During the whole period of treatment the eye should be closed and protected by a compressive bandage, applied with comfortable tightness over a pad of jeweler's cotton-wool. By this means the patient will be enabled to walk abroad without restraint, so long as he avoids injurious fatigue or hurry. Sometimes, especially when resting at home, a poultice will be a pleasant substitute for the pad and bandage; but neither the one nor the other should be applied until a quarter of an hour after the installation of the atropia, lest the solution should be absorbed and removed from the eye.

When the inflammatory symptoms are rapidly subsiding, the mercury, and probably the opium, may be entirely laid aside. But the continued use of atropia is necessary in order to prevent relapse; and the pupil should be kept fully dilated until the eye is quite well. As long as the pupil is dilated the eye does not participate in the functional changes of its fellow, to which, therefore, moderate use may be permitted. An attack of any severity usually leaves behind a temporary proneness to conjunctival irritation, which the atropia may often assist to keep up. For this the cautious use of a mild astringent, such as—

1388. R.	Zinci sulphatis,	gr. iv	
	Aquæ destillatæ,	f. ʒiv.	M.

This collyrium will usually be found effectual.

It will often be desirable to protect the eye from the glare, wind and dust after a severe attack, by the use of blue glasses. These are now made of a watch-glass form, for the purpose of excluding side light.

MR. A. R. HALL, SURGEON R. A.

This surgeon (*Practitioner*, April, 1875) records the very excellent results he has had with *balsam of copaiva* in iritis and scleritis. He gives to adults f. ʒij, in mucilage, three times a day. The pain should be diminished in twenty-four or forty-eight hours, and the sight be restored.

GEORGE LAWSON, F. R. C. S., SURGEON TO THE ROYAL LONDON OPHTHALMIC HOSPITAL, MANSFIELD.

In the treatment of *syphilitic iritis* our author regards mercury as imperatively called for. It should be given in doses sufficiently

large and frequent to bring the patient quickly under its influence, but as soon as the gums begin to grow tender and spongy the quantity should be diminished so as to avoid anything like profuse salivation. A piece, of the size of a nut, of the *unguentum hydrargyri* may be rubbed into the axilla night and morning, or a pill with calomel and opium may be administered:—

1389. R. Hydrargyri chloridi mitis, gr. j-ij
Pulveris opii, gr. ʒ-ss
Confectionis rosæ, q. s. M.
For one pill thrice daily.

If the patient be feeble, quinine may be prescribed at the same time, and it may be conveniently ordered in the following mixture:—

1390. R. Quiniae sulphatis, gr. xij
Acidi sulphurici diluti, f. ʒij
Tincturae aurantii, f. ʒvj
Aque destillatæ, q. s. ad. f. ʒvj. M.
Tablespoonful, in water, thrice daily, while the mercurial inunction is used night and morning.

If the patient has already been salivated before he first comes under treatment, the following iodide of potassium mixture should be given:—

1391. R. Potassii iodidi, gr. xxxvj
Potassæ bicarbonatis, ʒi
Infusi quassiae, f. ʒvj. M.
A tablespoonful thrice daily.

At the same time a slight mercurial action may be kept up by the use of the following:—

UNGUENTUM HYDRARGYRI CUM BELLADONNA.

1392. R. Extracti belladonnæ, ʒi
Unguenti hydrargyri, ʒvj. M.
To be rubbed into the brow and temple, and allowed to remain on during the day.

When all the effused lymph has been absorbed, and the iritis has nearly subsided, the mercurial medicines should be omitted, but the iodide of potassium should be continued for two or three months, combined with a bitter tonic, or, if the patient is anæmic, with some preparation of iron, as the

1442. R. Camphoræ, 3ss
 Alcoholis, to dissolve, q. s.
 Add ,
 Zinci oxidi,
 Amyli, aa 3ss. M.
 Use as a powder to allay the *burning heat of eczema*.
1443. R. Camphoræ, gr.vij
 Tincturæ conii, f.3ij
 Cerati adipis, 3j. M.
1444. R. Saponis mollis, 3j.
 Aquæ bullientis, Oj. M.
 Scent with some essential oil, and use in the second stage of eczema, to counteract the infiltration.
1445. R. Saponis mollis,
 Alcoholis,
 Olei cadini, aa f.3j.
 Olei lavandulæ, f.3iss. M.

This preparation is more elegant than Hebra's "Tinctura saponis viridis cum pice."

1446. R. Olei juniperis pyrolignei, f.3j-vij
 Adipis, 3j.
 Mix with 3ss of mutton suet.
1447. R. Picis liquidæ, f.3j
 Camphoræ, gr.x
 Adipis, 3x. M.

ERYTHEMA.

DR. L. DUNCAN BULKLEY, NEW YORK.

In *erythema simplex*, as well as in other acute skin diseases, this author has derived great benefit from the use of "Startin's mixture":—

1448. R. Magnesiæ sulphatis, 3j
 Ferri sulphatis, 3i
 Acidi sulphurici aromatici, f.3ss
 Tincturæ gentianæ, f.3j
 Aquam, ad. f.3ij. M.
 One teaspoonful after meals.

J. M. DA COSTA, M. D., PHILADELPHIA.

1449. R. Unguenti picis,
 Unguenti hydrargyri oxidi rubri, aa 3ss. M.
 To be applied morning and evening, in *chronic erythema*. Internally,
Duncan's solution, gtt.x, thrice daily.

In *acute erythema*, a useful sedative ointment is :—

1450. R. Liquoris plumbi subacetatis, aa f.3j. M.
Glycerinæ, 3vj.
Cerati simplicis,

Or,

1451. R. Cerati plumbi subacetatis, 3vj. M.
Glycerinæ, f.3ij.

PROF. J. LEWIS SMITH, NEW YORK.

1452. R. Pulveris zinci oxidi, aa 3j. M.
Lycopodii,

To be dusted occasionally over the inflamed surface in the *erythema intertrigo* of infancy, when the inflammation is severe and accompanied by moisture.

In slight cases of this affection, due to friction of opposing surfaces of the skin, or to the irritation of certain discharges, if not accompanied by moisture and destruction of the epidermis, dusting the surface thickly with *powdered starch*, so as to prevent attrition, will be all the treatment required. The disease may also be satisfactorily treated in most cases by the following wash :—

1453. R. Cupri sulphatis, gr.ij-iv M.
Aque rosæ, f.3ij.

To be kept constantly applied by means of linen saturated with it and pressed between the inflamed surfaces.

When this disease is caused by frequent acid stools, remedies which cure the diarrhoeal affection also cure the erythema.

FAVUS.

DR. HENRY G. PIFFARD, OF NEW YORK.

The treatment is to remove the crusts, to epilate the part, and thoroughly rub in a solution of corrosive sublimate, gr.ij to water f.3j. Sulphur or turpeth ointment, gr.xx-xxx to lard 3j, will destroy the parasite upon the surface, but in a few weeks the disease will return.

DR. TILBURY FOX, LONDON.

The hair should be cut short; the crusts must be removed by soaking with—

KERATITIS.

DR. LAURENCE TURNBULL, PHILADELPHIA.

In the phlyctenular keratitis of infants and cachectic subjects, this author commends this wash for the eye:—

1401. R.	Hydrargyri chloridi corrosivi,	gr. j	
	Ammonise muriatis,	gr. vj	
	Tincturæ belladonnæ,	f. ʒij	
	Aquæ destillatæ,	f. ʒviij.	M.

A teaspoonful of this, in a wineglassful of tepid water, to be applied frequently, with a pledget of lint, on the closed lids.

STYES.

LAURENCE TURNBULL, PHILADELPHIA.

As a hordeolum generally arises from an enfeebled constitution, it is necessary to combine with the local treatment a general tonic and alterative course. A combination of iron and quinine may be used, including *tinctura arnicæ*, gtt.xx, thrice daily. Locally, if seen early, touch the swelling with the ointment of nitrate of mercury, a drachm to the ounce, or double that strength.

MR. R. B. CARTER, F. R. C. S., LONDON.

For the early dispersion of styes, this surgeon recommends that as soon as the pimple is perceived, the eyelash passing through it be extracted with a fine forceps, and a sharpened point of dilute nitrate of silver stick be immediately placed upon the mouth of the open follicle and held there steadily for a few seconds.

WOUNDS AND INJURIES.

BURNS AND SCALDS OF EYES AND LIDS.

GEORGE LAWSON, F. R. C. S., ENGLAND.

1402. R.	Glycerinæ,		
	Aquæ rosæ,	ss	f. ʒij
	Aquæ destillatæ,	ad.	ʒviij.

M.

A soothing lotion for washing the eye and lids in cases of burns and scalds. A few drops of olive oil should be dropped into the eye, and the lids then gently closed, and some cotton-wool laid closely over them, which may be kept in its place by a single turn of a light bandage. The dropping of the oil into the eye should be repeated two or three times during the day, and each time the bandage is removed the above lotion should be employed to remove any discharge which may have accumulated. This is the only treatment slight cases require.

ACUTE OTITIS.

DR. EUGENE H. TRIQUET, OF PARIS.

1403. R. Cupri sulphatis, gr. xv
Mellis rosæ, f. ʒj
Aque rosæ, f. ʒiij. M.

Inject into the ear in acute catarrh, after the pain has been lessened by leeches and poultices.

1404. R. Acidi tannici, gr. iss
Glycerinæ, f. ʒijss. M.

Dip a camel's-hair pencil in this solution, and touch with it the membrane of the tympanum when torn, in order to facilitate cicatrization. At the same time, the tympanum should be kept immovable, by means of pledgets of cotton introduced well into the auditory canal, and by excluding all noise from the neighborhood of the patient.

1405. R. Aloës socotrinæ,
Scammonii,
Gamboginæ, ss gr. xv
Tragacanthæ, q. s. M.

Divide into fifteen pills. Two in the evening, several times a week, in the otitis of drinkers and smokers. Locally, emollient fumigations.

OTORRHOEA.

DR. LAURENCE TURNBULL, OF PHILADELPHIA.

The first indication is to remove the secretions. This is accomplished by the syringe and a warm solution of borate and bicarbonate of soda, of each one drachm to a pint of hot water.

If the pus is in the middle ear, and the opening in the membrana tympani small, the patient being unable to force the matter out by the process of Valsalva (namely, a prolonged inspiration and expiration, with the nostrils closed), even if the operation is frequently repeated, then the physician must employ Politzer's process, which consists in this:—Take a straight or slightly curved tube, open at both ends, twelve or fifteen inches in length; this is introduced about half an inch into either of the anterior nares. The nares are then closed air-tight over the tube by gentle pressure with the fingers on both *alæ nasi*, prior to which the patient takes a small quantity of water in his mouth, which he swallows exactly at the same time that air is blown into the tube, which may be done by the operator having the other end of the tube in his mouth, or an india-rubber bag being attached to the tube, and compressed by the operator or assistant.

If antiseptics are needed to remove the odor, carbolic-acid solution, gtt.v-x to f.3j, may be employed. Almost all aural surgeons have agreed upon certain astringent substances which are safe and proper to use in this class of chronic cases; and among the number the sulphate of zinc is one of the best, being employed in about the strength of from one to three grains to the ounce of water. Stronger solutions of this salt are resorted to, and are all right and proper if there is no perforation of the membrana tympani. But if there is an opening in this membrane, no matter how small, it is safer, and gives less pain to the sensitive middle ear, to resort to the milder solution, not exceeding three grains to the ounce of water. The alum salts are apt to cause abscesses. Nitrate of silver, in this class of cases, is very objectionable, especially in very strong caustic solutions, even when subsequently neutralized by a solution of common salt.

After the use of the astringent for four or five weeks, it is well to change it, or add a solution of two grains of sulphate of copper, or nitrate of lead.

IV. DISEASES OF THE SKIN.

Acne—Alopecia—Eczema—Erythema—Favus—Herpes—Impetigo—Lepra—Lichen—Lupus—Mentagra—Pityriasis—Prurigo—Psoriasis—Rosacea—Scabies—Tinea—Urticaria—General Therapeutics of Skin Diseases.

ACNE.

HENRY G. PIFFARD, M. D., OF NEW YORK.

In *acne sebacea* this writer commends a weak solution of tannin; or a powder containing tannin, ʒj to rice powder ʒj; or touching the points with *tinctura ferri chloridi*. In *acne simplex* he has found the following lotion very useful:—

1406. R. Sulphuris sublimati,
Alcoholis,
Tincturæ lavandulæ compositæ,
Glycerinæ,
Aquæ camphoræ,

℞ ℥j. M.

Use as a lotion.

J. M. DA COSTA, M. D., PHILADELPHIA.

1407. R.	Acidi carbonici fluidi,	m _{xxx}	
	Glycerinæ,	f. 3ij	
	Cerati adipis,	3vj.	M.

Employed in the treatment of acne and other pustular skin affections, in some cases with signal effect. If it produces too much irritation in this strength, it may be diluted with fresh lard.

1408.	R.	Liquoris potassæ arsenitis,	f.3j	
		Extracti cascariillæ fluidi,		
		Tincturæ rhei dulcis,	ss	f.3x. M.

A teaspoonful thrice daily. Locally, iodide of sulphur ointment (gr.xv to adeps ℥i) twice a day, in chronic cases.

In simpler cases, try first a very mild ointment. None is more soothing than one of lard:—

1409.	R.	Liquoris plumbi subacetatis,	m _{xx}	
		Glycerinæ,	f.3j	
		Cerati simplicis,	ʒviij.	M.

To be rubbed on thoroughly, morning and evening.

DR. TILBURY FOX, OF LONDON.

In the treatment of acne, it is necessary, first of all, to insure cleanliness; secondly, to remove any cause of debility present, correct menstrual deviations, cure dyspepsia, etc., and especially to prevent constipation. These preliminary cares are *sine qua non* to success. Then, in the simpler cases, which exhibit little inflammatory action, friction and gentle stimulation may be had recourse to; borax, soda and calamine lotions, or the following, will suffice:—

1410. R. Hydrargyri chloridi corrosivi, gr.ij.
Emulsionis amygdalæ amaræ, f.ʒviij. M.

In the severer forms much more remains to be done. The general condition of the health must be improved, and whatever special indications which are present be fulfilled. Locally, if there be much inflammation, warm poultices, hot vapor douches, and warm lead lotions are called for. When these have allayed the irritation, absorbents may be used—oxide of zinc lotion or the oxide of zinc and glycerine. Our author generally prescribes:—

1411. R. Hydrargyri chloridi corrosivi, gr.ij
Sodæ biboratis, ʒss
Glycerinæ, f.ʒj
Aquæ, f.ʒviij. M.

To be frequently used.

PROF. HEBRA, OF VIENNA.

Our author treats acne as follows: He gives vapor douches to the face, applies soft soap, or—

1412. R. Potassæ causticæ, ʒj
Aquæ, Oj. M.

In other cases he washes the face with soft soap, and at night applies a paste made as follows:—

1413. R. Sulphuris, ʒj
Alcoholis, f.ʒj. M.

To be painted on by means of a camel-hair pencil. This is removed in the morning by means of soap. Cocoa butter is kept on all day.

He sometimes uses,

1414. R. Hydrargyri chloridi corrosivi, gr.v
Alcoholis, f.ʒj. M.

To be applied with a compress for two hours.

At other times, he applies, two or three times a day,

1415. R. Hydrargyri chloridi corrosivi, gr. j
Tincturæ benzoini, f. ʒj
Aquæ, f. ʒvj. M.

ALOPECIA.

DR. L. DUNCAN BULKLEY, NEW YORK.

1416. R. Tincturæ capsici, aa f. ʒss
Tincturæ cantharidis, f. ʒij
Tincturæ nucis vomicæ, f. ʒss
Glycerinæ, ad. f. ʒiv. M.
Aquæ,

Use as a lotion, to be well rubbed in, night and morning, in *alopecia areata*.

Dr. BULKLEY does not believe this a parasitic disease. The prognosis is fair, but there is a tendency to relapse.

When the baldness is the result of *seborrhæa*, as shown by the abundant dandruff, use—

1417. R. Tincturæ cantharidis, f. ʒj
Unguenti hydrargyri nitratis, ʒij
Unguenti aquæ rosarum, ʒvj
Olei amygdalæ amaræ, gtt. ij. M.

As a stimulant to the loss of hair after febrile diseases, simple debility or syphilis, the following is serviceable:—

1418. R. Tincturæ cantharidis, f. ʒij
Tincturæ capsici, aa f. ʒss
Olei ricini, ad. f. ʒiv. M.
Aquæ coloniensis,

Rub on the scalp with a bit of flannel, night and morning. The cantharides should be increased till a slight tingling follows the application.

DR. BOUCHUT, PARIS.

1419. R. Zinci chloridi, ʒijss
Beef marrow, ʒj. M.

The head is shaved, and frictions made morning and evening with this pomade, until a minute purulent eruption is produced. The frictions are then stopped, to be recommenced when the eruption has disappeared.

cipitate or nitrate), and finally the prolonged use of some bland oily preparation, as—

1485. R. Hydrargyri sulphatis flavæ, gr. xv
Unguenti rosarum, 3j. M.

J. M. DA COSTA, M. D., PHILADELPHIA.

1486. R. Unguenti hydrargyri nitratis, ss 3ss. M.
Cerati simplicis,

For *pityriasis of the scalp*. To be applied morning and night. The hair should be cut short, and poultices applied before using this ointment. The scalp is to be kept clean with soap.

TILBURY FOX, M. D., LONDON, PHYSICIAN TO THE SKIN DEPARTMENT,
CHARING-CROSS HOSPITAL.

1487. R. Creasoti, gtt. xl
Glycerinæ, f. ʒiij
Aque, f. ʒvj-viij. M.

Use in *pityriasis*.

1488. R. Hydrargyri ammoniati, ʒj
Olei olivæ, f. ʒj
Adipis, ʒj
Olei rosæ, ʒiij
Tincturæ tolutani, gtt. xx. M.

Use in *pityriasis capitis*.

PRURIGO.

ANTI-PRURITICS.

The best applications suited for the temporary relief of pruritus are *vinegar*, *lemon juice*, *weak solution of corrosive sublimate*, *tincture and watery solution of opium*, *creasote ointment and lotion*, *tar ointment*, and especially that of *juniper tar*, *ointment of opium with camphor*, the *diluted nitrate of mercury ointment*, *ointment of lime*, *ointment of cyanide of potassium*, *lotion of hydrocyanic acid*, *aconite*, *acetate of ammonia*, *sulphuret of potash*, *chlorate of soda*, etc.

The following formulæ are all useful:—

1489. R. Calci hydratis, ʒj
Sodæ carbonatis, ʒss
Tincturæ opii, f. ʒss
Adipis, ʒj. M.

- | | | | |
|----------|--|-------------------------------------|----|
| 1490. R. | Tineturæ opii,
Sulphuris sublimati,
Zinci oxidi,
Olei amygdalæ dulcis,
Adipis, | f.3ss
3ss
3j
f.3j
3iij. | M. |
| 1491. R. | Hydrargyri sulphureti rubri,
Tincturæ opii,
Sulphuris sublimati,
Adipis, | 3ij
f.3ij
3ss
3v. | M. |
| 1492. R. | Ammonisæ muriatis,
Pulveris hellebori albi,
Adipis, | 3j
3ss
3iij. | M. |
- For local prurigo.

A local remedy, frequently of service in allaying the itching of *prurigo senilis*, is glycerine, applied with a sponge.

ERASMUS WILSON, F. R. S., LONDON, ETC.

Arsenic, properly administered and watched, may be regarded as a specific in prurigo. Much may be accomplished toward the restoration of a healthy condition of the skin by ablutions with the juniper-tar and carbolic-acid soap, frictions and manipulations with the hand, after the manner of the shampooer, the tepid bath, the sweating bath, used with discretion, and moderately stimulating local applications.

PSORIASIS.

DR. HENRY G. PIFFARD, OF NEW YORK.

This writer concedes *arsenic* a great repute in psoriasis, but believes that in the best practice it is being replaced by other means. *Balsam of copaiva*, four to eight capsules daily, is an efficient remedy. *Carbolic acid*, gr.j–iij thrice daily, is successful in some cases.

Local applications are, strong alkalies, tar, emollients and baths.

J. M. DA COSTA, M. D., PHILADELPHIA.

- | | | | |
|----------|--|---------------------|----|
| 1493. R. | Unguenti hydrargyri oxidi rubri,
Unguenti hydrargyri,
Glycerinæ, | ss
3ij
f.3ss. | M. |
|----------|--|---------------------|----|

For psoriasis; to be rubbed in morning and evening, when there are no vesicles, after washing the parts with castile soap.

Internally,

1494. R. *Liquoris arsenici et hydrargyri iodidi*, f. $\overline{3}$ ss
Extracti dulcamaræ fluidi, f. $\overline{3}$ ijss. M.
 A teaspoonful thrice daily, after meals.

Avoid fatty articles of diet and those highly salted. The most important thing in skin diseases is to determine, not so much their character externally, as to ascertain with what internal conditions they are associated.

In the acute stages of psoriasis, the following may be used:—

1495. R. *Cerati plumbi subacetatis*, $\overline{3}$ ij
Glycerinæ, f. $\overline{5}$ j
Cerati simplicis, $\overline{3}$ iv. M.

Attention should be paid to the digestive system. Then, after the acute inflammatory condition has subsided, the red precipitate ointment (F. 1493) may be employed, or—

1496. R. *Sulphuris iodidi*, gr. x
Adipis, $\overline{3}$ j. M.
 To be rubbed in morning and evening.

Or,

1497. R. *Unguenti hydrargyri nitratis*,
Unguenti picis,
Cerati adipis, ss $\overline{3}$ ss. M.

Internally, Donovan's solution, combined as above (F. 1494).

Or,

1498. R. *Liquoris arsenici et hydrargyri iodidi*, f. $\overline{3}$ ij
Tincturæ cinchonæ composita, f. $\overline{3}$ ijj. M.
 A dessertspoonful thrice daily.

TILBURY FOX, M. D., LONDON, PHYSICIAN TO THE SKIN DEPARTMENT.
 CHARING-CROSS HOSPITAL.

1499. R. *Argenti chloridi*, gr. v-xx
Cerati adipis, $\overline{3}$ vj. M.
 A useful ointment in this affection.

If the disease is slight and localized to a few spots only, treatment may be commenced at once with tarry applications, for the scales are thereby removed sufficiently well.

1500. R. Olei juniperis pyrolignei, f.ʒij
 Olei olivæ, f.ʒj
 Adipis, ʒj. M.
 To be used night and morning.

Or,

1501. R. Creasoti, gtt.vj
 Unguenti hydrargyri, gr.xv
 Adipis, ʒij. M.

In chronic cases, with thickening of the patches, or where there is much elevation of the disease, as in the *nummular* variety, a more decided impression may be produced by—

1502. R. Picis liquidæ,
 Alcoholis, aa f.ʒij. M.
 To be rubbed in with flannel.

When there is a tendency to “discharge,” use—

1503. R. Unguenti hydrargyri nitratis, ʒij
 Glycerinæ, f.ʒij
 Linimenti camphoræ, f.ʒj. M.

PROF. MORIZ KOHN.

1504. R. Acidi carbolici, gr.xv
 Pulveris glycyrrhizæ et syrupi q. s. M.
 Divide into twenty pills. Give at first six to nine a day, and increase gradually to twenty a day.

Prof. HERBA has also obtained good results from these pills in psoriasis. But it must not be forgotten in using them that the exhibition of large doses of carbolic acid irritates the kidneys and provokes the passage of albumen in the urine.

1505. R. Sulphuris loti,
 Extracti gentianæ, aa ʒss
 Althæa pulveris, q. s. M.
 Divide into twenty pills. From two to ten a day, in squamous skin affections. Sulphur baths.

ROSACEA.

DR. LOUIS A. DUHRING, OF PHILADELPHIA.

This writer observes that *rosacea* is a disease of the blood vessels, especially of the nose, and is not a species of acne, though they

of soda, and the arseniate of ammonia, arsenious acid, iodide of arsenic, and the arseniates of iron and quinia; of as yet untried efficacy, solution of the chloro-phosphide of arsenic and arseniate of antimony.

The dose of arsenic, small at first, is to be increased slowly until some of its physiological effects are manifested, or the disease yields; it may then be somewhat diminished.

It is very important that arsenic be taken very regularly and persistently, and always under the supervision and frequent inspection of the physician.

Frequently arsenious acid is better tolerated when combined with opium, as:—

1526. R.	Acidi arseniosi,	gr. j.	
	Pulveris opii,	gr. iv.	M.
Make sixteen pills.			

NELIGAN recommends highly what he calls the ioduretted solution of the iodide of potassium and arsenic, after the following formula:—

1527. R.	Liquoris potassæ arsenitis,	℥lxxx	
	Potassii iodidi,	gr. xvj	
	Iodidi puri,	gr. iv	
	Syrupi florum aurantium,	f. ʒij.	M.
Each f. ʒj of this contains ℥v of Fowler's solution.			

In skin diseases of a nervous type the following formula, after ROUTH, promises well:—

1528. R.	Acidi arseniosi,	gr. j	
	Phosphori,	gr. ʒ	
	Acidi hydrochloridi diluti,	f. ʒj.	M.
For an adult, ℥xv–xx thrice daily.			

The only local application of arsenic which is justifiable is either one where the strength is so weak, and the extent of its use so small, that there is no danger from absorption, which may occur when not expected, or, one of such a strength as to kill the adjoining tissue at once, and so prevent absorption, as is the case with Marsden's mucilage (F. 1254).

MR. THOMAS HUNT, F. R. C. S., LONDON.

Mr. HUNT has urged the claims of arsenic in skin diseases more strongly than any other writer; and as he claims that everything

MILDER PARASITICIDES (FOR ORDINARY USE).

1515. R. Potassii sulphureti, ʒiij
Saponis mollis, f.ʒj
Aquæ calcis, f.ʒviij
Alcoholis, f.ʒij. M.
- Used in the various forms of *tinea*, *scabies*, etc.
1516. R. Hydrargyri chloridi corrosivi, gr.ij-iv
Ammoniac muriatis, ʒss
Alcoholis, f.ʒss
Aquæ rosæ, ad. f.ʒvj. M.
- In *tinea versicolor*, *scabies*, *prurigo*.
1517. R. Acidi carbolici fluidi, f.ʒij
Glycerinæ, f.ʒj
Aquæ rosæ, ad. f.ʒviij. M.
- Use in *ringworm* of the surface especially.

Also, in the same affection,

1518. R. Sodæ biboratis, ʒij
Glycerinæ, f.ʒj
Adipis, ʒj. M.
1519. R. Hydrargyri sulphatis flavi, ʒss
Olei amygdalæ dulcis, aa
Glycerinæ, f.ʒij
Adipis, ʒij. M.
- Used in *tinea*.
1520. R. Unguenti hydrargyri nitratis, ʒss
Sulphuris, ʒij
Creasoti, m℥x
Adipis, ʒj-ij. M.
- Use in ordinary *ringworm* and *tinea sycosis*.

URTICARIA.

WILLIAM AITKEN, M. D., EDINBURGH.

In the treatment of nettle-rash, emetics and purgatives are to be employed in the first instance; afterward faulty digestion is to be corrected. The surface of the eruption may be dusted with flour, or the following lotion may be used:—

1521. R. Ammoniac carbonatis, ʒj
Plumbi acetatis, ʒij
Aquæ rosæ, f.ʒviij. M.

ERASMUS WILSON, F. R. S., LONDON, ETC.

In *chronic* urticaria, the deranged functions are to be restored. The administration of the mineral acids with a bitter is serviceable. Very chronic cases require arsenic. The following may be used:—

1522. R. Liquoris arsenici chloridi, f.℥ss
Acidi muriatici diluti,
Aque aurantii florum, ℥℥ f.℥ij
Syrupi simplicis, f.℥iij. M.

A tablespoonful to be taken alone or in water, *with the meals*, three times a day.

The local treatment consists in the use of remedies for the purpose of relieving the itching, tingling, and smarting. For this purpose employ sponging with hot water; ablution with the juniper-tar or carbolic-acid soap; frictions with—

UNGUENTUM PICIS JUNIPERI.

1523. R. Olei juniperi pyrolignici, f.℥j
Adipis purificatæ, ℥ij
Sevi ovilli purificati, ℥vj. M.

Melt with gentle heat and make an ointment.

This is an elegant preparation. It may be used of the above strength or diluted. Or the

LOTIO HYDRARGYRI BICHLORIDI.

1524. R. Amygdalæ amaræ, No. xx
Aque destillatæ, f.℥vj
Contuse and mix together, then strain and add
Hydrargyri chloridi corrosivi, gr. xvj
Spiritus vini rectificati, f.℥ij. M.

Or the

LOTIO ACIDI CARBOLICI.

1525. R. Acidi carbolici fluidi, f.℥ss-j
Glycerinæ, f.℥ss
Aque destillatæ, f.℥viijss. M.

Or, sponging with hot vinegar, with a lotion of carbonate of ammonia, a lotion of aconite, and liniments of opodeldoc and chloroform or laudanum. When one application fails the other must be tried. The tepid bath affords almost instantaneous relief.

THE GENERAL THERAPEUTICS OF SKIN DISEASES.

PROF. ERASMUS WILSON, F. R. C. S., F. R. S., ETC.

This eminent author says, in one of his lectures, that as regards the classification of skin diseases, we may regard it from a strictly therapeutical point of view alone, and go armed for the treatment of all cutaneous diseases with four remedies:—

First. We must have *sulphate of magnesia*; this will form the basis of treatment of all disorders of assimilation, and include an extensive series, embracing nearly the whole of the *eczemata* of middle life. He does not allude to the *adjuvantia* and *corroborantia* with which sulphate of magnesia may be associated: this part of the subject is left to the judgment and experience, to the taste and refinement, of the prescriber.

Secondly. We may take *arsenic*, the typical remedy for defective nutritive power in every tissue of the frame—the special agent of cure of the debility of the nutritive period of life; and under this head we may include the *eczema* of infancy, chronic *eczema* at every period of existence, the *impetigos* and *ringworms* of children, and the *lepra vulgaris* of all ages.

Thirdly. There is a branch of nutritive diseases which is peculiarly represented by *cod-liver oil*—namely, *struma* and *lupus*. We cannot adopt *struma* as a group by itself, but only as a sub-group of the much more comprehensive family of diseases resulting from defect of nutritive power; whilst another sub-group of the same great family is one which includes *epithelioma* and *cancer*.

As a fourth remedy, let us take *quinine*, which we may justly regard as representing the leading feature of cure in all the neurotic or neuropathic affections.

And, finally, we have *mercury* and iodide of potassium, which represent another extensive and important group of diseases, to wit, those dependent on syphilitic poison.

ARSENIC IN SKIN DISEASES.

DR. L. DUNCAN BULKLEY, OF NEW YORK.

According to this author, arsenic is valuable in chronic rheumatism, hence is useful in arthritic eruptions; it is serviceable in certain neuroses, as chorea and neuralgia, therefore in skin diseases in neurotic elements; and it possesses anti-malarial properties,

and is consequently serviceable in diseases of the skin showing periodic symptoms, as intermittent urticaria, etc., likewise in patients with other skin diseases who have been exposed to miasmatic influences.

Arsenic is certainly also valuable in psoriasis, eczema, pemphigus, acne and lichen, in proper cases, and when due regard is paid to the secretory organs, and to diet and other elements of general health; of less certain value in lupus, ichthyosis, sycosis, verruca and epitheliomatous and cancerous diseases; it is absolutely useless or harmful in the syphilodermata, the animal and vegetable parasitic diseases (except in rare cases), in elephantiasis græcorum and arabum, in purpura, true prurigo, herpes zoster, scleroderma, molluscum contagiosum and fibrosum, keloid, vitiligo, nævus, etc.

In reference to its administration, it is quite sure that it is eliminated very rapidly, chiefly by the bowels and kidneys, so that the urine shows evidence of it in a few hours; no trace of it can be found on careful analysis of the body after death, two weeks after the last dose of arsenic. The drug, therefore, does not accumulate in the system, and no fear of this need be entertained; but when it is administered in increasing doses, absorption may be hindered, and when the doses become very large, active absorption of the large dose may give rise to a suspicion of cumulative action.

The first symptom of a full dose of arsenic, in a very large share of cases, is a fullness about the face and eyes, and conjunctival irritation and tenderness. This need not be exceeded, but may often be kept up with advantage to a slight degree till the disease yields. Before any harm is done by the arsenic, either this or a slight nausea or diarrhoea manifests itself. It should always be given with or just after meals; it is often best to give it alone, or with a small amount of bitter infusion. The bowels should be first well purged, and an occasional laxative will both assist the action of the drug and prevent or modify some of its unpleasant effects. If the urine becomes loaded and the tongue coated, it is best to stop the medicine for a short time and give diuretics; some of these disturbances can be prevented by combining an alkali, as acetate of potassa, carbonate of soda, or aromatic spirits of ammonia, with the arsenic.

In regard to the most serviceable forms in which to use arsenic, they are named in the order of their value:—Solution of the chloride of arsenic, solution of the arseniate of potassa, that of the arseniate

The following formulæ for parasiticides are commended :—

DR. MALASSEZ.

1536. R. Hydrargyri sulphatis flavæ, gr. xv
Butyri coccos,
Olei ricini,
Olei amygdalæ dulcis, ss 3v. M.
A mild parasitic ointment. Apply twice daily in pityriasis, tinea, sycosis, etc.

DR. R. LIVEING.

LOTIO ACIDI SULPHUROSI.

1537. R. Acidi sulphurosi,
Aquæ destillatæ, ss f. ʒiv. M.
Used in all parasitic skin diseases.

LOTIO CALCHII SULPHURETI.

1538. R. Calcis vivæ, lb. ʒ
Sulphuris, lb. ss
Coque cum aqua, Ov
Evaporetur, ad. Oij. M.
Used in scabies and other parasitic diseases.

LOTIO HYDRARGYRI PERCHLORIDI.

1539. R. Hydrargyri perchloridi, gr. x
Bismuthi subnitratæ, gr. cxxx
Spiritus camphoræ, f. ʒss
Aquæ, Oj. M.
Used in parasitic diseases and acne.

UNGUENTUM CREASOTI.

1540. R. Creasoti, ℥vj
Unguenti hydrargyri, gr. xxx
Hydrargyri oxidi rubri levigati, gr. xx
Adipis recentis, ʒj. M.
Used in parasitic and other skin diseases.

J. M. DA COSTA, M. D., PHILADELPHIA.

1541. R. Calcis hyposulphitis,
Sodæ hyposulphitis, ss ʒss
Aquæ, f. ʒiv. M.
A useful lotion for *sycosis mentis*.

The following are useful :—

VESICATING, VEGETABLE PARASITICIDES.

1542. R. Tincturæ iodinii compositæ, f. ʒj
Iodinii, gr. x.
Potassii iodidi, gr. xv. M.
Used in chronic stages of vegetable parasitic diseases.

1543. R. Pulveris cantharidis, $\bar{3}ij$
 Acidi pyro-acetici concentrati, f. $\bar{3}viii$
 Acidi tannici, $\bar{3}j$. M.

Macerate for a week and strain. Used in *tinea decalvans*.

1544. R. Acidi carbolici fluidi, f. $\bar{3}j$
 Glycerinæ, f. $\bar{3}ss$. M.

Used in *tinea*.

SKIN HOSPITAL, LONDON.

1545. R. Pulveris cantharidis, $\bar{3}j$
 Acidi tannici, $\bar{3}ss$
 Acidi acetici, f. $\bar{3}iv$. M.

Macerate seven days and strain.

DR. TILBURY FOX, OF LONDON.

This writer, speaking of skin diseases of general character, remarks, as regards *local* remedies, there are three main rules to be observed, viz.:—

1. Whenever active hyperæmia is present, be the disease what it may, applications of a stimulating nature should not be used, but the treatment should be essentially *soothing*, otherwise the inflammatory symptoms will be increased, and the disease spread.

2. The action upon the skin of an external irritant—as scratching—should be prevented, and the air excluded from inflamed or excoriated surfaces, especially by oil-packing and otherwise.

3. Not until the stage of active hyperæmia has passed should astringents, stimulating applications, or revulsives be employed. These, and absorbents, are to be reserved for the stages of vascular sluggishness and inflammatory induration and thickening.

As regards internal or general remedies, it is proposed to indicate below, in as practical and concise a form as possible, the conditions which should be taken into consideration in framing the treatment of such diseases as erythema, intertrigo, urticaria, eczema, lichen, prurigo, pemphigus, hydroa, ecthyma, furunculus, pityriasis rubra and psoriasis; and inflammatory conditions of the glands and hair follicles, as acne, dysidrosis, and sycosis, which are analogous to, and only differ in regard to their anatomical seat from, those preceding. This short sketch or chart, inasmuch as it applies to the bulk of skin diseases, should be used regularly in determining the treatment, which must necessarily vary with the different combinations of the influencing agencies referred to. These conditions are:—

A Syphilitic Taint, which tends to induce induration from the

Fifth. In syphilis, the greatest care should be taken to avoid anything beyond the most moderate use of stimulants; their abuse in this disease is a source of the greatest aggravation.

Sixth. In all cases in which the onset or early stage of a skin disease is accompanied by febrile disturbance, however slight, or in which the disease is very hyperæmic, stimulants should be avoided, and the plainest and simplest diet ordered. In marked cases of this kind, a milk diet for a while is often found to be very beneficial.

Seventh. In some cases in which the skin is hyperæmic, this condition is much increased by the ingestion of food, especially if dyspepsia exists, in consequence of the sympathy existing between the stomach and the skin of the part affected. This state of things is especially marked in such diseases as acne, congestion of the face, and non-parasitic sycosis. Stimulants must be avoided, except they be diluted with some alkaline water: the use of a diet appropriate to the dyspepsia must be rigorously enforced.

Eighth. It is said that psoriasis requires an ample meat diet; but the patient must be dieted, and not his disease—i. e., the diet should be plain and nutritious, and adapted to the constitutional peculiarities of the individual, according to circumstances.

Ninth. In all cases where a skin disease has become chronic, and where there is debility, the patient should be allowed a full, unstimulating diet.

Our author has at times employed *rubber cloth* in the treatment of every variety of eczematous affections, from *eczema squamosum* to *eczema impetiginosum*. He makes use either of closely applied pieces, roller bandages, or of whole garments made of this material. The rubber cloth (*toile caoutchouque*) consists of ordinary cotton, which is first coated with a solution of caoutchouc, and then submitted to the process known as vulcanizing. This consists in sprinkling the stuff with a mixture of caoutchouc and sulphur, and exposing it to a high temperature under a pressure of sixteen atmospheres. The material obtained in this way is gray, black, or of any other desirable color, flexible, impermeable to watery fluids, smooth and polished on one surface, dull and rough on the other, and smells of caoutchouc and sulphur. Oil, as well as fats and alcohol, dissolve this layer of caoutchouc, thus destroying its desirable qualities, and rendering it useless for the purpose in question. It can be worked like any other cloth, that is, be cut, sewed, and

its surfaces be made to adhere by means of a cement containing caoutchouc. These properties led our author not only to apply it simply to the affected parts, but to have various pieces of clothing made of it; for instance, caps for the head, bags in which to envelop various regions of the body, gloves, stockings, and, finally, entire drawers, with and without feet attached, as well as shirts and blouses. Besides these, he has some of the ordinary gum-elastic (not vulcanized) made into bandages and gloves, and is convinced that this is also useful.

In every case the smooth side of the vulcanized cloth is laid in contact with the skin, from which the collections of morbid products, the scales, crusts, etc., have been previously removed, although in some cases the cloth is applied, for the sake of experiment, above these. On removing the cloths, at the end of twelve or fourteen hours, they are found very moist, often entirely soaked through, and the fluid, which had collected on the surface of the skin in considerable quantity, of a penetrating smell, worse even than that of the "stinking foot-sweat." The skin itself, however, when cleansed from the diseased products thus softened, appears odorless and only reddened, more or less robbed of its epidermis, moist and shiny. The sensations of the patient during their application are not at all unpleasant, there being no pain or itching. After their removal itching generally comes on, and, unless they are renewed within half an hour or so, a feeling of contraction and pain also, so that the patients long for their immediate reapplication. If the treatment is continued in this way, the whole series of symptoms gradually diminish—the moistening, redness, itching and pain—and in many cases the cure of the eczema is seen to be complete in the course of two months.

But as it is known that under other treatment the cure of eczema may be effected in this period of time, the question arises what advantage the caoutchouc method offers over others, such as by unguentum diachyli, tar, zinc, sublimate, etc.

The answer must be that, although in general no excessive advantage can be attributed to the caoutchouc, nevertheless there are cases in which this new remedy can be used with especial profit. It applies particularly to eczema of the hands, fingers, flexures of the joints, scrotum and feet, in which the application of salves, etc., is not only attended by much inconvenience to the patient, but in which also the caoutchouc preparations are able to afford a much

more speedy relief to the pain produced by the fissures, inasmuch as such parts can be kept constantly moist by the easy application of the gloves, coats, bandages, suspensories and stockings employed. Although, therefore, no new panacea has been introduced into dermato-therapeutics by the use of caoutchouc in the treatment of eczemata, it must still be regarded as a very *valuable addition to our means of cure*, and all the more as it does not prevent the helping use at the same time of other known remedies. Thus in many cases the cure of eczema is powerfully assisted by the simultaneous use of schmierseife, baths, douches, tar preparations, etc., and these latter in turn made more serviceable by the application of the caoutchouc clothes.

In the general treatment of skin diseases, it must always be borne in mind that there is very frequently debility present, which favors the development of the disease, and which must be got rid of, if the eruption is to be cured, in the best way. In fact, the skin of a healthy person will mostly resist the action of many local irritants, but cannot do so if the subject be weak and debilitated; so that it is an important point to give tonics, as a rule, in cases of eruptions excited by local irritants. There is, for example, one simple combination of causes, debility and local irritants, inducing erythema, eczema, lichen, etc. Other examples readily occur, such as eczema in a gouty subject, modified by neglect and scratching; psoriasis in a strumous subject in whom the tendency to the disease is hereditary; erythema in a rheumatic subject, in connection with dyspepsia; eczema occurring in cooks exposed to the irritating influence of the fire, whilst the patient also has a blood current charged with retained excreta, in consequence of inefficient bowel and kidney action; lupus in a scrofulous subject; tinea tonsurans in a body with persistent anæmia and a phthisical tendency; pruritus in connection with senile atrophy of the skin, liver derangement, and gout. Other examples might be multiplied almost indefinitely.

In setting about, therefore, the cure of any given cutaneous disease, attention must be paid not only to predisposing and exciting causes, but to coincident occurrences and accidental concomitants modifying the disorder.

V. VENEREAL DISEASES.

Balanitis—Gonorrhœa, Acute and Chronic (Complications and Sequelæ)—Syphilis, Primary and Constitutional.

BALANITIS.

AUGUSTE CULLERIER, OF PARIS.

When it is possible to uncover the glans, make three or four dressings a day with a piece of fine linen or lint (inserted between the glans and prepuce), wet with one of the following

ASTRINGENT SOLUTIONS.

1546.	R.	Argenti nitratis, Aquæ destillatæ,	gr. iij—ivss f. 3iv.	M.
1547.	R.	Aluminis, Aquæ rosæ,	ʒij—iv f. 3iv.	M.
1548.	R.	Acidi tannici, Vini aromatici, Aquæ rosæ,	gr. xv—xxx f. 3xj q. s. ad. f. 3iv.	M.
1549.	R.	Tincturæ iodinii, Aquæ destillatæ,	m xv—xxx f. 3ix.	M.

SILAS DURKEE, M. D., BOSTON.

The best topical application in this disease for slight abrasions and small patches of aphthæ is the following:—

1550	R.	Liquoris sodæ chlorinatæ, Aquæ,	f. 3ss f. 3vij.	M.
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This solution is to be applied on pieces of lint between the prepuce and the glans, three or four times a day.

If the erosion be considerable, and the puriform exudation copious, an astringent lotion may be appropriate, thus:—

1551.	R.	Zinci sulphatis, Acidi tannici, Glycerinæ, Aquæ,	gr. ij gr. iv f. 3ij f. 3iv.	M.
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Apply with lint.

Simple lime-water will frequently effect a cure.

considers them more valuable than any of the abortive injections. They are to be employed only, however, when the gonorrhœa is of recent date, when there is little or no pain, and where the discharge is not as yet muco-purulent.

Under favorable circumstances, when the abortive treatment is thus employed, the discharge will diminish, or disappear in the course of four or five days. The treatment should not then be suspended, but, on the contrary, continue for several days after the cure is apparently complete. If this precaution be neglected, the inflammation may reappear. If, after from six to eight days, no improvement is manifest, it is useless to persist longer in this form of treatment. Astringent injections should not be combined with this use of the balsam. They have no advantage at this early period of the disease, and often keep up an amount of irritation, which may interfere with the effect of the internal remedy.

When the inflammatory period of gonorrhœa is over, CULLERIER advises injections to complete the cure.

The following injections are those most frequently prescribed at the Hôpital du Midi:—

- | | | | | |
|----------|--|----|--------------------|----|
| 1555. R. | Zinci sulphatis,
Plumbi subacetatis,
Aquæ, | aa | gr. xv
f. ʒiv. | M. |
| 1556. R. | Aluminis,
Aquæ, | | ʒi ss
f. ʒiv. | M. |
| 1557. R. | Acidi tannici,
Aquæ, | | gr. viij
f. ʒj. | M. |
- Two injections a day are sufficient. Before each injection the patient should urinate.

SILAS DURKEE, M. D., BOSTON.

- | | | | | |
|----------|---|----|---|----|
| 1558. R. | Copaibæ,
Spiritus ætheris nitrosi,
Tincturæ kino,
Morphiæ sulphatis,
Aquæ camphoræ, | aa | f. ʒiij
f. ʒ ss
gr. iv
f. ʒij. | M. |
|----------|---|----|---|----|
- One teaspoonful thrice daily.

Usually, an efficient check will be put to the gonorrhœa in eight or ten days by the use of this preparation.

- | | | | |
|----------|---|--------------------|----|
| 1559. R. | Pulveris cubebæ,
Pulveris aluminis,
Pulveris cinnamomi, | ʒviij
ʒj
ʒj. | M. |
|----------|---|--------------------|----|

For thirty-two powders. One thrice daily.

This combination of cubebs and alum will usually diminish the urethral discharge in two or three days, and if the patient will observe a perfectly quiet state of the body, he will find that in eight or ten days the gonorrhœa will be nearly at an end. The strictest avoidance of exercise constitutes an important element in the treatment of every case of gonorrhœa, and the patient should even keep in a recumbent posture in order to secure the best effects in the shortest time.

As with the balsam copaiba, so with cubebs; they should not be discontinued under a fortnight after the cessation of the urethral discharge.

The tincture is an elegant and convenient form of administering cubebs. It may be given in doses of f.ʒj to f.ʒij four or five times a day, or combined thus:—

1560. R.	Tincturæ cubebæ,	f.ʒij	
	Tincturæ cantharidis,	f.ʒiiss	
	Morphiæ sulphatis,	gr.ij	
	Aquæ camphoræ,	f.ʒiij.	M.
A dessertspoonful thrice daily, in half a gill of cold water.			

Or, the fluid extract may be used in this manner:—

1561. R.	Extracti cubebæ fluidi,	f.ʒiv	
	Morphiæ sulphatis,	gr.ij	
	Mucilaginis acaciæ,		
	Aquæ camphoræ,	aa f.ʒij.	M.

Our author also recommends the following formulæ of Drs. DRUITT, LANGSTON PARKER, BEYRAN and HOLMES COOTE:—

1562. R.	Copaibæ,	f.ʒss	
	Olei cubebæ,	f.ʒss	
	Liquoris potassæ,	f.ʒiij	
	Spiritus myristicæ,	f.ʒss	
	Aquæ camphoræ,	f.ʒj.	M.
Two teaspoonfuls thrice daily.			

The combination of copaiba with the oil of cubebs, as above, will sometimes be found to agree better with the stomach than the capsules of any other combination.

In chronic gonorrhœa or gleet, the balsam and the cubebs may be advantageously combined with iron, as follows:—

1563. R.	Pulveris cubebæ,	ʒss	
	Copaibæ,	f.ʒij	
	Ferri sulphatis,	ʒj	
	Terebinthinæ olei,	ʒiij.	M.

To be made into boluses of gr.x each. From fifteen to thirty a day.
Usefully employed in lax constitutions.

1564. R. Pulveris oubebeæ, ʒj-ij
 Ferri carbonatis, ʒss-j. M.
 For one powder, to be taken thrice daily.

The above is particularly useful after the acute symptoms have subsided.

Our author employs the following in gleet:—

1565. R. Tincturæ cantharidis, aa f.ʒj
 Olei terebinthinæ, f.ʒij. M.
 Mucilaginis acaciæ, f.ʒij.
 A teaspoonful thrice daily, together with the following injection:—

DR. N. GALLOIS, OF PARIS.

1566. R. Acidi tannici, ʒj
 Opii pulveris, gr. iv
 Glycerinæ, q. s. M.

Make into *urethral suppositories*, which, soft in summer, are quite solid during the winter.

They are to be moistened with warm water and introduced into the urethra, where a piece of the length of about an inch and a half is to be allowed to remain. This quickly dissolves and turns into a whitened mass in mixing with the urethral mucus. Treated in this manner, it is said that the most violent cases cure in from one to three weeks.

1567. R. Copaibæ, f.ʒiv
 Spiritus menthæ piperitæ, ℥xx
 Mel despumatæ, f.ʒias
 Sacchari, ʒiss
 Aquæ destillatæ, f.ʒiij.

Place the copaiba, the honey, the sugar and the water in a vessel and warm over a slow fire, constantly stirring, to avoid a too great elevation of the temperature and to favor the division of the oleo-resin of copaiba. At the end of ten minutes remove the fire, color the mixture, and add the peppermint after cooling. The product thus obtained, nearly deprived of the odor of copaiba, is of a gelatinous consistence, and can be administered to those who cannot take the ordinary preparations.

DR. WILLIAM A. HAMMOND, NEW YORK.

In simple gonorrhœa, after the discharge is well established, reliance should be placed upon injections. Those recommended in syphilitic gonorrhœa will be found most advantageous.

The following mixture of copaiba is capable of doing more good than the uncombined balsam, and it is not much more disagreeable to the taste or stomach:—

eighths of an inch, because often the trouble is close to the orifice of the urethra, and a longer nozzle would prevent the injections coming well in contact with it.

This application is best made in the morning, after the daily stool, again about noon, and again about five or six o'clock; not just before bedtime, as is sometimes recommended. The manipulations tends to increase the disposition to chordee, and should not be made just before going to bed.

As for particular formulæ, one can use a mixture containing vegetable and mineral astringents, say—

1575. R.	Tincturæ matico,		
	Tincturæ catechu,	ss	f. ʒj
	Extracti opii aquosi,		gr. xvj
	Plumbi acetatis,		gr. x-xij
	Glycerinæ,		f. ʒiv
	Aquæ rosæ,		f. ʒvss. M.

One may substitute for the acetate of lead sixteen grains of sulphate of zinc, or of the baborate of zinc.

There is another form of injection, which acts by making a coating for the inflamed membrane. It consists of bismuth held in suspension, which, when injected, gives a mechanical protection:—

1576. R.	Bismuthi subnitratæ,		ʒij
	Glycerinæ,		f. ʒiv
	Aquæ rosæ,		f. ʒvss. M.

Shake well when used.

Add the following internally:—

1577. R.	Tincturæ sanguinaræ,		
	Tincturæ kino,		
	Balsami copaibæ,		
	Spiritus ætheris nitrosi,	ss	f. ʒj
	Olei gaultheriæ,		f. ʒj. M.

A teaspoonful every four hours. With these use large diluent drinks.

COMPLICATIONS AND SEQUELÆ OF GONORRHOEA.

GONORRHOEAL ORCHITIS.

GERMAN HOSPITAL, PHILADELPHIA.

At this institution, if epididymitis resulted, the patient was put at rest on his back, the testicles supported on a cushion, and cooling lotions applied, if there were acute inflammatory symptoms. Should the epididymus become chronically indurated and indis-

1581. R.	Copaibæ,	mij	
	Cinnamomi essentia,		
	Mucilaginis acaciæ,	aa	mxx
	Aquæ,		f. 3j. M.

This amount four times daily.

When all the pain and spasmodic twitching of the compressor muscles have passed away, cubeba, in moderate doses—say, ten grains, four times daily—is sometimes useful to check the secretion completely.

For *local treatment*, he states that when considerable pain is felt if the finger is introduced into the rectum, and the prostate feels large and soft, leeches are useful—that is, three or four applied by means of a leech tube to the mucous membrane within the anus; or if the introduction of a foreign body causes pain, which is often the case, and the requisite skill be not at hand, twenty leeches applied to the perineum are very beneficial. When the protastic tenderness has subsided, cool hip-baths for five minutes, morning and evening, beginning at 85° F., and gradually lowering the temperature to 50° F. by adding cold water, are useful. They may be continued several weeks with benefit. In continuous moderate counter-irritation, lauded by some surgeons in chronic prostatitis, he has no faith. He has used it over and over again, but could never satisfy himself that the repeated application of small blisters to the perineum lessened the prostatitis. If it benefited the patient at all, it did so only by engaging his attention and satisfying him that “something was being done.” Counter-irritation by means of caustic solution of iodine is useful when applied in the following way:—Paint the perineum, the genito-crural folds, and neighboring parts of the thighs, so that the area is as large as half a square foot, and thus raise a considerable amount of irritation too great to allow the patient to walk about for some days. Such irritation sometimes removes all the symptoms in a few hours, except the gleet, and that is then in a fair way to depart. But this favorable result is by no means constantly obtained; hence he avoids counter-irritation till he has tried other means.

In the “irritable” or “relaxed” prostate which sometimes comes from this cause, sometimes from masturbation, unsatisfied desire, spermatorrhœa, etc., the treatment is first to allay the patient’s fears, which are generally extravagant, inquire into his diet, and

1568. R. Copaibæ, f.ʒij
 Spiritus ætheris nitrosi, f.ʒj
 Tincturæ opii, aa f.ʒj
 Tincturæ iodinii, ʒij
 Magnesiæ, f.ʒv. M.
 Mucilaginis acaciæ,
 One to two teaspoonfuls thrice daily.

No internal treatment should be depended upon to the exclusion of injections.

Stimulants should be avoided, as should also *salt meat*.

In the management of the chronic stage of simple gonorrhœa or *gleet*, the affected individual should be placed upon a good, plain, nutritious diet, and the mind and body pleasantly and systematically employed. The greatest benefit is derived from cold plunge baths, followed by frictions of the skin with coarse towels or hair-brushes. As internal remedies use—

1569. R. Ferri sulphatis, gr.ij
 Quiniæ sulphatis, gr.ss. M.
 For one pill thrice daily.

The oxalate or citrate of iron may be substituted in the same dose. In addition, our author has derived great benefit from the use of the following recipe:—

1570. R. Tincturæ cantharidis, f.ʒss
 Strychniæ, gr.ʒ
 Syrupi limonis, f.ʒij. M.
 A teaspoonful morning and evening.

Injections should be persevered with, changing one for another, as they lose their effect.

MR. BERKELEY HILL, F. R. C. S., LONDON.

In the early stage, copaiba and cubebs are not beneficial, and only two injections are of any service, viz., half-hourly injections of tepid water, or hourly injections of alum or sulphate of zinc, gr.ʒ to aquæ f.ʒj. The former are often useless, and the latter, if they increase the irritation, are to be stopped.

SUPPOSITORY FOR CHORDEE.

1571. R. Morphiæ sulphatis, gr.ʒ-ss
 Butyri cocœ, gr.ʒ. M.
 To be passed into the rectum on going to bed.

grain of morphia under the skin, to maintain insensibility for the three or four hours that elapse before the pain of the injection subsides.

This injection is also useful in chronic prostatitis, and must be carried out in the same way. For this it may need repetition more than once, or even twice; but repetition is rarely if ever needed for simple irritable prostate, as after one injection the slight tenderness remaining is easily controlled by the regular introduction of a bougie about once a fortnight, which the patient may learn to do for himself. When the digestion has been restored or greatly improved, and the local irritability has subsided, the recovery may be made complete by sending the patient a long sea voyage. By such means his body is invigorated, his mind fully occupied, and he is removed from temptation to sexual excitement. In a year or so, by the time he is fitted for sexual intercourse in marriage, he should seek that as the best safeguard against relapse into his old condition.

GONORRHOICAL RHEUMATISM.

PROF. RICORD, PARIS.

1583. R. Tincturæ scillæ,
Spiritus camphoræ,
Vini opii, ss f.3v. M.

A resolvent liniment, to be applied, in fomentations, to joints affected with gonorrhoeal arthritis when the pains have nearly disappeared.

DR. J. F. M. GEDDINGS, CHARLESTON.

This writer (*Charleston Medical Journal and Review*, February, 1876) considers that affected joints must be given absolute rest, and the acute symptoms relieved by leeches and the cold or warm douche, as the patient prefers. After these have subsided, he knows of no remedy so beneficial as the actual cautery, applied lightly to many points around the joint, so as only to involve the epidemis and the superficial layer of the chorion.

RÉSUMÉ OF REMEDIES.

Acetum. Cider vinegar, more or less diluted, has been found of good service in chronic gleet.

Alumen. A saturated solution of burnt alum, used as an injection three times a day, is commended by Dr. A. DE Vos, of Belgium, as the best of all injections in gonorrhoea when the acute symptoms are subsiding.

Argenti Nitras. The employment of this agent in gonorrhœa has been much discussed. The abortive method by strong injections (gr. xxx- $\bar{5}$ j, to water f. $\bar{3}$ j) has deservedly fallen into disrepute. This strength may, however, be safely applied to the vagina in specific vaginitis. It should be painted on the part with a brush through a speculum. In the male, the strength in the first stage should not be beyond gr. $\bar{4}$ to the ounce of water. This may be used every three hours until the substitutive inflammation has been established.

Belladonna is of service in *chordee* and the genesic erethism which precedes the disease. Dr. VAN DEN CORPUT prescribes—

1584. R. Extracti belladonnæ, gr. ij
Camphoræ,
Lupulinæ, aa gr. xij. M.

For eight pills. From two to four at night.

Bismuthi Subnitras is a popular ingredient in injections. It is best suspended in thin mucilage. Its action is mechanical, in keeping the inflamed surfaces asunder. The solution must be prepared fresh every day, as it sours and becomes irritating.

Chloral, Hydrate of, has been used as an injection, gr. v-x to aquæ f. $\bar{3}$ j.

Cadmii Sulphas. This has been used in acute gonorrhœa, gr. j to water f. $\bar{3}$ j-f. $\bar{3}$ ij.

Camphora. Professor RICORD's favorite remedy in *chordee* and *painful erections* :—

1585. R. Camphoræ pulvis,
Lactucarii, aa gr. ij. M.

This amount in a pill every hour from supper until bedtime.

Dr. DURKEE gives f. $\bar{3}$ j of the spiritus camphoræ in sweetened milk on going to bed. If the patient wakes with the *chordee*, he is to repeat the dose.

Carbolicum Acidum has been found efficient in recent cases. Mr. GEORGE ASHMEAD, L. R. C. S., Edin., commends (*The Lancet*, December, 1871), the following :—

1586. R. Acidi tannici, ℥j
Acidi carbolic, ℥ij
Glycerinæ, f. $\bar{3}$ j
Aquæ, f. $\bar{3}$ vij. M.

Half an ounce of this as an injection, thrice daily.

Colchicum has been commended by Sir BENJAMIN BRODIE in the gonorrhœa of gouty subjects. He also gave ℥xxx of the wine at night for *chordee*.

Copaiba is regarded by many as a specific in gonorrhœa. It is contra-indicated by hyperæmia, and should not be exhibited until the acute symptoms have been conquered, and when the discharge is whitish and thick. Mr. BERKELEY HILL uses the following :—

1587. R. Copaibæ, ℥ij
Mucilaginis acaciæ, f. $\bar{3}$ ij
Aquæ cinnamomi, f. $\bar{3}$ vij. M.

Tablespoonful thrice daily.

This drug has been often used as an injection. LANGLEBERT employs an *aqua copaibæ*. Dr. DICK, of London, recommends—

1588. R. Olei copaibæ, f.ʒj
 Pulveris acaciæ, ʒij
 Aquæ, f.ʒvj. M.

In subacute gonorrhœa and in gleet this injection is to be used twice a day for a few days; afterward more frequently.

The formula of VELPEAU is as follows :—

1589. R. Copaibæ, f.ʒij
 Tincturæ opii, f.ʒss
 Mucilaginis acaciæ, f.ʒiss. M.

For an injection, to be repeated twice or thrice a day.

It is asserted that successful results have been obtained in this manner in cases in which the balsam could not be tolerated by the stomach.

Creasote has been administered in doses of gtt.ʒ-ijj, thrice daily (*Half-Yearly Compendium*, January, 1874).

Cubeba is often indispensable in gonorrhœa. It may be given in any and all stages of the disease with benefit. A pleasant form is the oleo-resin, gtt.x-xxx on a lump of sugar, three or four times a day. Some prefer the pill form, in which it may often be advantageously combined with copaiba and sandalwood oil :—

1590. R. Cubebæ olei,
 Copaibæ olei,
 Santali olei, ss f.ʒj
 Magnesie, ʒij. M.

For sixty pills. Six to eight a day.

Cupri Acetas is preferred by some. Dr. RANZ, of Paris, uses—

1591. R. Plumbi acetatis,
 Cupri acetatis, ss gr.ix
 Acidi acetici, gtt.v
 Aquæ, f.ʒvij. M.

Use as an urethral injection, thrice daily.

Cupri Sulphas is a valuable remedy. In very weak solution (gr.ʒ to aquæ f.ʒj) it may be used as an abortive. After the acute stage has passed, the following is a useful formula :—

1592. R. Cupri sulphatis, gr.iv
 Morphie sulphatis, gr.vijj
 Liquoris plumbi subacetatis, f.ʒj
 Aquæ rosæ, f.ʒiv. M.

About half an ounce thrice daily as an injection.

Erigeron Canadensis. The oil of the Canada fleabane, in doses of gtt.v-xx every two or three hours, has been found by Dr. G. A. STARR, of Milwaukee (*Canada Medical and Surgical Journal*, May, 1876), to cure gonorrhœa in from two to six days.

Ferri Chloridi Tinctura has been found valuable as an internal remedy in the gleet of anæmic subjects.

Ferri Subsulphatis Liquor, in weak solution, gtt.v-x to aquæ f.ʒj, has been used with advantage in some obstinate cases of gleet.

Potassii Bromidum is a valuable injection in the acute stage :—

1597. R. Potassii bromidi, ʒiiss.
Glycerinæ, f.ʒijss
Aquæ, f.ʒiv. M.

Use lukewarm, twice daily, in acute gonorrhœa.

Potassii Chloras is especially useful in specific vaginitis. A useful combination of the potash salts is :—

1598. R. Potassii chloratis, ʒiv
Potassii permanganatis, gr.x
Aquæ, ʒj. M.

Inject a teaspoonful night and morning in vaginitis.

Potassii Permanganas is extolled by Dr. WILLIAM A. HAMMOND. He believes it has the power of destroying the contagious property of the secretion from the mucous membrane :—

1599. R. Potassæ permanganatis, gr. ʒ-ij
Aquæ, f.ʒj. M.

The weaker solution should be used first, and gradually increased. Eight or ten injections should be made in the twenty-four hours.

Quiniæ Sulpha has been used with great advantage in the acute stage, where there is much scalding and a profuse discharge :—

1600. R. Quiniæ sulphatis, gr.xvj
Acidi sulphurici diluti, f.ʒj
Aquæ rosæ, f.ʒviij. M.

Use half an ounce twice daily as an injection.

Santalum. Sandalwood oil has of late been prominently urged as a cure for gonorrhœa. It is given in capsules, or in the following prescription, which is that of Dr. THOMAS B. HENDERSON, who introduced this product to notice :—

1601. R. Olei santali, gtt.xx-l
Alcoholis, f.ʒj
Olei cinnamomi, gtt.ij-v. M.

This amount three times a day, in water.

Dr. FRANK F. MAURY gives gtt.xv , thrice daily, on sugar. This remedy sometimes causes vertigo, of which the patient should be notified.

BERKELEY HILL recommends the following formula :—

1602. R. Olei santali, f.ʒss
Liquoris potassæ, f.ʒj
Aquæ menthæ piperitæ, f.ʒiv. M.

A dessertspoonful thrice daily.

Tannicum Acidum, dusted on the part, is the best application in *balanitis*, *blennorrhœa of the glans*, and *herpes præputialis*. It may also be

the penis in a suspensory bandage or handkerchief against the abdomen, never to let it hang down, and to be particular that the dress is loose enough not to chafe the parts in walking. If the sore is underneath the foreskin, the lint should be so interposed that the skin does not touch it, both to prevent the sore being chafed and to avoid the formation of fresh ulcers.

As chancres may excite bubo at any period of their existence, destruction of their surface with caustic may prevent this consequence whenever it is employed. Still, this advantage is not sufficient in practice to require the invariable use of caustics, as the chance of a particular sore not being accompanied by a bubo is two to one, even when left to run its course. Besides this, it is often exceedingly difficult to destroy several sores thoroughly by one application of caustic; hence the patient, after having undergone all the suffering and inconvenience of cauterization, may be disappointed on finding, in a few days, his sore assume its original character.

Among the most effectual caustics is one RICORD prefers. He makes a paste of powdered charcoal and strong oil of vitriol, which he lays on and rubs into the chancre. In a few minutes the surface is destroyed, and forms an eschar or crust, which falls off in a week, leaving the sore a simple granulating surface. It is a very effective remedy, being not liable to overflow the sides of the ulcer and attack the healthy skin, as is the case with liquid caustics. But it is not always at hand, hence less convenient than another—the *strongest nitric acid*.

The best way to use this is to daub it, with a glass brush, over the floor and edges of the ulcer, and allow it to soak well into the surface of the sore for a few minutes, before the excess of acid is neutralized with a little carbonate of soda dissolved in water. The skin surrounding the ulcer should be protected by grease, but the edges may be left clear for the action of the caustic. The chloride of zinc and caustic potash are slower in action, and must be left longer in contact with the sore, or they will not penetrate deeply enough to destroy it altogether. The actual cautery, by hot iron or galvanic wire, is at times very useful when a large amount of tissue has to be destroyed; otherwise it is not preferable to chemical caustics, while it alarms the patient much more than the latter. When the caustic has done its work and the excess is washed away with cold water, the sore should be wrapped in wet lint, and

SYPHILIS.

DR. MCCALL ANDERSON, ENGLAND.

This author is convinced that mercury is indispensable in constitutional syphilis, and believes that the patient should be brought fairly under the influence of the drug, although in no case should salivation be produced. His favorite formula for its exhibition is—

1610. R. Potassii iodidi, ℥j
 Hydrargyri chloridi corrosivi, gr. ij
 Potassæ chloratis, ℥ss
 Infusi quassiae, f. ℥viij. M.
- One or two teaspoonfuls after each meal.

WILLIAM AITKEN, M. D., EDINBURGH.

1611. R. Hydrargyri chloridi corrosivi, gr. j
 Potassii iodidi, gr. xxx
 Liquoris potassæ arsenitis, ℥xxxvj
 Alcoholis, f. ℥j
 Extracti sarsaparillæ fluidi, f. ℥iiij
 Aquæ cinnamomi, ad. f. ℥xij. M.
- Two tablespoonfuls three times a day, after meals, in the treatment of some of the more intractable forms of syphilitic squamæ.

JOHN K. BARTON, M. D. (DUBLIN), F. R. C. S. I., ETC.

Our author recommends mercury as generally necessary in the first and second stages of the disease, though, with RICORD, he believes its action is limited to causing the disappearance of the symptoms present when it is administered, and that it cannot be considered capable of neutralizing the poison. He lays great stress upon its gradual introduction into the system, and, in common with COLLES, BRODIE and SIGMUND, prefers that this should be effected by inunction.

The patient's diet and daily habits should in the first place be regulated; the former should consist of meat once daily, without any stimulants beyond beer or porter, sometimes better without any at all. He should keep regular and early hours, going to his bed not later than ten o'clock, and not rising before eight in the morning; during the day he may be engaged in business, if it be not of a laborious or exciting description.

1612. R. Unguenti hydrargyri, ℥j.

Of this half a drachm should be rubbed in each morning after breakfast, for twenty minutes or half an hour. The morning is

1635.	R.	Creasoti, Aquæ destillatæ,	gtt.xv-xlv f.℥x.	M.
1636.	R.	Potassii iodidi, Tincturæ iodinii, Aquæ destillatæ,	gr.xv f.℥iss-v f.℥iij.	M.

The last recipe is the one which has given the best results in the hands of our author.

DR. J. L. MILTON, EDINBURGH.

This writer (*Edinburgh Medical Journal*, March, 1875) states that he has found "Zittmann's decoction" a very important aid in secondary syphilis. This is the *decoctum sarsaparillæ compositum* of the *German Pharmacopœia*, and contains small portions of senna and of the mild chloride of mercury and red sulphide of mercury. A formula for it is given in the *United States Dispensatory* (thirteenth edition).

Mr. MILTON says that chance led him to try the Zittmann decoction, and with such surprisingly good results that he now uses it in every case and form of syphilis. He first administers a course of iodide of potassium and bichloride of mercury. He strongly advises that, at the outset, the dose should be very small, not more than two or three grains of the potassium, and from the thirtieth up to the twentieth of a grain of the perchloride. Nothing can militate more effectually against the success of the treatment than to risk setting up irritation by giving the remedies too freely at first, or even by raising the strength of them too rapidly at any time. The object in view is effectually defeated so soon as ever symptoms of iodic poisoning begin. There is no choice but to entirely abandon the medicine for some days, perhaps weeks, but certainly until the symptoms have quite abated.

But all precautions, for the purpose of enabling the stomach to bear the potassium and mercury, fail more or less frequently unless aperients are combined with them, and the patient is restricted to a proper diet. As to the aperient, it is essential that it should consist of two chief ingredients—a pill to be taken over night, and a draught for morning use. He has repeatedly tried both separately, and has failed quite often enough with both to deter him from any repetition of the experiment. The pill may consist of colocynth, blue pill, and hyoscyamus, or a mixture of rhubarb, soap, and jalap; a sedative or aromatic, sufficiently potent to obvi-

1614. R. Pilulæ hydrargyri, gr.xx
Ferri sulphatis exsiccatae, gr.x
Extracti opii, gr.v. M.
For twenty pills.
1615. R. Hydrargyri cum cretâ,
Quiniæ sulphatis, aa ʒj
Extracti opii, gr.iiij. M.
For ten pills.

The special treatment for *secondary ulceration of the throat* is:—

1616. R. Argenti nitratis, gr.xxx-xl
Aquæ destillatæ, f.ʒj. M.

To be freely applied over the velum and back of the pharynx every day, or every other day, while any ulceration or redness continues. The solution may be used with the spray producer.

If toward the close of the secondary period sore throat reappears, as it often does, it then does not yield so rapidly, and it will be necessary to prescribe the following mixture, which will quickly cause it to heal:—

1617. R. Potassii iodidi, ʒij
Potassæ chloratis, ʒiv
Aquæ, f.ʒviij. M.

Two tablespoonfuls thrice daily.

In the tertiary stage, our author employs iodide of potassium, in doses of from eight to ten grains thrice daily. A salt of ammonia added to the solution seems to increase the activity of the iodide, thus:—

1618. R. Potassii iodidi, ʒiv
Ammoniæ muriatis, ʒij
Tincturæ cinchonæ compositæ, f.ʒiv. M.

A teaspoonful, in a wineglassful of water, thrice daily.

FREEMAN J. BUMSTEAD, M. D., NEW YORK.

1619. R. Hydrargyri chloridi mitis, gr.xxxvj
Tincturæ opii, f.ʒj
Cerati simplicis, f.ʒj. M.

For application to chancre when an unctuous dressing is required. It is much used in French hospitals. Unguents are less desirable than lotions, and should only be employed when the evaporation of a water-dressing cannot be prevented, even with the assistance of oiled silk and glycerine, as may happen from the position of the sore, and during a journey, etc.

and cortical impurities; then let the operator be in a warm room, have the mortar warm, and the pill machine warm; put the powdered gum into the mortar, add very sparingly of alcohol, beat thoroughly, and add more if necessary, but be careful and not get in too much. The object aimed at is to form a mass as stiff as can be worked by means of warmth and a very little alcohol. When the mass is formed, work it rapidly into pills, and roll them into a cold tin pan, in a cool room. If one makes these pills any other way, they will prove more or less a failure.

Use no pulverized licorice, or other powder. If one uses never so little too much alcohol, the pill will be soft, and never harden.

Of these pills, the patient can take from nine to eighteen per day, usually twelve, and will declare he feels better all the time; so much so, that if he runs out of pills he will soon call for more. This treatment applies to secondary and tertiary, is excellently adapted to external or cutaneous manifestations, and may be carried out without other medicines.

ABORTIVE TREATMENT OF CHANCRE.

SILAS DURKEE, M. D., ETC., BOSTON.

If, as the result of contagion, or of a suspicious connection, the virile organ has upon it a papule, pustule, abrasion, or sore, which *may* be the forerunner of constitutional syphilis, the best thing the surgeon can do, locally, is to make a caustic application to the spot, if this can be done seasonably, say within ten days from the appearance of the abnormal condition. The design of this operation is twofold: to destroy morbid structure, and to create a healthy recuperative action in the part. Our author employs for this purpose *potassa fusa*, the *acid nitrate of mercury*, or *concentrated nitric acid*. He never uses nitrate of silver or Vienna paste.

In cases of abrasion, he generally applies *nitric acid* by means of a small bit of lint secured to a silver probe, or, if the surface be very small, by means of the end of a glass rod. The sore is to be freely covered with the acid, warm water being at hand to wash off any excess immediately. The *acid nitrate of mercury*, when used, is applied in the same manner. The slough will be detached in three or five days, and a healthy granulating surface appear. If a solitary vesicle, pimple or pustule is to be destroyed, he sometimes selects *potassa fusa*, which penetrates deeper than either of the

The corrosive chloride is the least desirable of all the preparations for internal administration. He prefers either the pilulæ hydrargyri or the protiodide. The latter should be given half an hour or an hour after meals, as it is irritating to some stomachs. He most frequently employs:—

1622. R. Mass. pilulæ hydrargyri, gr.ij-ijj
 Ferri sulphatis exsiccata, gr.j. M.
 This amount, in a pill, three or four times a day, one hour after eating.

BERKELEY HILL, M. B., LONDON, F. R. C. S., ETC.

Our author states that in the treatment of soft chancres the first thing is to remove general causes of irritation, such as too stimulating diet, wine, and especially venery. All severe exercise must be relinquished; in fact, confinement to the house for some days is often time gained by the progress the sore makes with rest. While the wound is healing the patient should always avoid standing long at a time, to lessen the risk of bubo; the horizontal position, moreover, greatly promotes healing of the sore. If erections at night are troublesome, they may often be prevented by the patient's last meal being a light one, taken two or three hours before bedtime. For persons of ordinary health it is not necessary to do more than this, but if patients are exhausted, or in a debilitated condition, ordinary rules for improvement of the health are necessary; quiet rest, with good diet and stimulants, must be freely given. The digestion may be invigorated by tonics, such as—

1623. R. Acidi nitrici diluti, f.ʒj
 Extracti cinchonæ fluidi, f.ʒij. M.
 From thirty to forty-five drops, in water, thrice daily.

Or;

1624. R. Tincturæ ferri chloridi,
 Spiritus chloroformi,
 Glycerinæ, aa f.ʒj. M.
 A teaspoonful thrice daily, in water.

LOCAL TREATMENT OF THE SORES.

Most sores need only cleanliness to allay irritation and induce them to granulate. The sore should be washed three or four times a day while the discharge is abundant, and covered with pieces of lint dipped in cold water, over which oil silk should be wrapped, if the sore is situated in an outward part, like the dorsum penis or groin. If the patient is a man, he should be directed to support

CONSTITUTIONAL TREATMENT OF CHANCRE.

Our author is partial to the use of corrosive sublimate internally in the treatment of indurated chancre. He advises its use in pill form :—

1641. R. Hydrargyri chloridi corrosivi,
Ammoniae muriatis, ss gr. xvj M.
Aque destillatæ, f. ʒiiss.
Make a solution, and make up with bread crumbs into one hundred and twenty-eight pills.

The formula gives one-eighth of a grain of corrosive sublimate to each pill. One to be taken morning and night, immediately after meals. In five or six days one may be taken thrice daily. If pills cannot be taken, order—

1642. R. Hydrargyri chloridi corrosivi,
Ammoniae muriatis, ss gr. vj M.
Tincturae cinchonae compositae, f. ʒij
Aque, f. ʒiv.
A teaspoonful morning and evening for one week; afterward thrice daily, directly after eating. When this medicine has been taken for twelve or fifteen days, it is good practice to omit it for four or five days, and then resume it.

PROF. S. D. GROSS, PHILADELPHIA.

1643. R. Unguenti hydrargyri nitratis, ʒj
Cerati simplicis, ʒvj-ʒj. M.

In the treatment of chancre no remedy is so efficacious as this. The objection made to greasy applications can only be considered as having any force when there is a want of cleanliness. The dressings should be changed every five or six hours, and care should be taken that the ointment shall always be very fresh. When the parts begin to granulate, apply—

1644. R. Cerati zinci carbonatis, ʒj
Adipis, ʒvj. M.

Or, merely a bit of dry lint carefully interposed between the contiguous surfaces often promotes cicatrization with remarkable rapidity.

1645. R. Hydrargyri chloridi corrosivi, gr. j
Potassii iodidi, ʒij
Syrupi sarsaparillae compositi, f. ʒiij. M.
Dessertspoonful thrice daily, shortly after meals, in tertiary syphilis.

Professor GROSS almost invariably combines the bichloride of mercury with iodide of potassium in the treatment of tertiary syphilis, particularly when the affection is of long standing. An infirm, broken state of the system is no bar to the use of mercury in this mode of combination; on the contrary, it often affords the medicine an opportunity for its best display. To counteract any disagreeable effects of the above recipe, such as gastric irritation, diarrhoea, etc. (which, however, rarely ensue), an anodyne, as a small quantity of morphia, or from five to ten drops of the acetated tincture of opium, may be combined with each dose.

In regard to the dose of iodide of potassium in the treatment of tertiary syphilis, Professor GROSS states that long experience has taught him that while less than ten grains thrice daily will rarely do much good, there are few cases in which more than this quantity is really ever needed.

With reference to the employment of iodide of sodium and iodide of ammonium as substitutes for iodide of potassium, Professor GROSS sometimes recommends their use in five-grain doses. CULLERIER says that the iodide of ammonium gives no better results than the iodide of potassium, and he has abandoned its use. It has been asserted, however, on good authority, that the iodides of sodium and ammonium will sometimes succeed in doses in which the iodide of potassium has failed. (TANNER, and others.) They are more nauseous than the iodide of potassium.

Bromide of potassium has been employed in tertiary syphilis recently. CULLERIER says no reliance can be placed on this remedy; BERKELEY HILL asserts that in small doses, in conjunction with the iodide, it increases the energy of the latter very materially. It should be borne in mind in administering the bromide of potassium that it is decomposed by a syrup.

To overcome the disagreeable taste of the iodide of potassium, so often complained of by patients, PAGET says that a mixture of whisky and the compound syrup of sarsaparilla makes the best vehicle.

M. LIEGEOIS.

Our author employs the following formula for the hypodermic injection of corrosive sublimate in secondary syphilis :—

1646. R.	Hydrargyri ohloridi corrosivi,	gr. iij	
	Morphiæ muriatis,	gr. iiss	
	Aquæ destillatæ,	f. ʒxxiijss.	M.

℞vss. (= about gr. $\frac{1}{2}$ of the sublimate). Ordinarily no inflammation follows this injection.

DR. FRANK F. MAURY, PHILADELPHIA.

This surgeon prefers, as a cauterant to the primary sores, either the fuming nitric acid or the acid nitrate of mercury. His abortive treatment of bubo is to paint it with six coats of tincture of iodine morning and evening, and in the intervals a half-brick, heated as hot as it can be borne, is wrapped in flannel and placed over the swelling. This leads to resolution of the tumor.

For constitutional treatment he has found much advantage from Gibert's syrup, as follows:—

1647. R.	Hydrargyri iodidi rubri,	gr.ij
	Potassii iodidi,	3j-ij
	Aquæ,	f 3j.
	Dissolve, filter and add	
	Syrupi simplicis,	f 3vij.
	A tablespoonful three times a day.	

DR. H. E. WOODBURY, PHILADELPHIA.

This writer condemns (*Medical Times*, October, 1874) the custom of opening buboes by free incisions. It is sufficient to pass a narrow-bladed bistoury through the gland, and then inject a drachm of diluted tincture of iodine (one part to four of water). In some cases the use of the knife can be altogether avoided by the following treatment:—

The patient is confined to his bed; a half-brick, covered with flannel—a single thickness—is laid upon the bubo. A lump of ice is kept upon the brick, and as it melts, the flannel is saturated with ice-water. He has seen a large bubo disappear in twenty-four hours under this treatment by cold and pressure; a combination of iodine and iodide of potassium in syrup of sarsaparilla being administered internally. If this course be resorted to at the proper time, the necessity for surgical interference will often be avoided. If the knife be used, the smaller the incision, the better and more rapid the cure.

SURGEON W. S. W. RUSCHENBERGER, U. S. N.

1648. R.	Hydrargyri iodidi rubri,	gr. j	
	Iodinii,	gr. ij	
	Potassii iodidi,	3j	
	Syrupi sarsaparillæ compositi,	f 3xv	
	Aquæ,	f 3j.	M.
	Tablespoonful four times a day.		

PROF. J. LEWIS SMITH, M. D., NEW YORK.

In infantile syphilis, the following formulæ may be employed :—

1649. R. Hydrargyri cum cretâ, gr. iij-vj
 Sacchari albi, ʒj. M.
 Divide into twelve powders. One to be taken thrice daily.
1650. R. Hydrargyri chloridi corrosivi, gr. j-ij
 Syrupi sarsaparillæ compositi, f. ʒij
 Aquæ, f. ʒviij. M.
 A teaspoonful thrice daily.

Mercury, in whatever form employed, should not be discontinued entirely until several weeks after the syphilitic symptoms in the child have disappeared. It is proper to continue it for a time, in diminished quantity, after the health seems fully restored.

When the mercurial is omitted, tonics are often required. The preparations of cinchona are useful in these cases, as are also those of iron. The liquor ferri iodide is especially useful in this class of cases.

THOMAS HAWKES TANNER, M. D., F. L. S., ETC., LONDON.

1651. R. Hydrargyri chloridi corrosivi, gr. ij
 Pulveris opii, gr. v-viij
 Pulveris guaiaci, ʒss. M.
 Divide into sixteen pills. One twice or thrice a day, where it is desirable to continue the use of the corrosive sublimate over many weeks.

SYPHILITIC LARYNGITIS.

MELCHIOR ROBERT.

1652. R. Hydrargyri chloridi corrosivi, gr. ij-iiij
 Decocti conii, f. ʒvj. M.
 A useful gargle in syphilitic ulcers of the mouth and throat.
1653. R. Potassii iodidi, gr. xv
 Mellis despumati, f. ʒj
 Decocti hordei, f. ʒiv. M.
 A gargle, to be employed as above.
1654. R. Potassii iodidi, gr. ix
 Tincturæ iodinii, f. ʒss
 Aquæ destillatæ, f. ʒv. M.
 A gargle, to be employed as above.
1655. R. Hydrargyri chloridi corrosivi, gr. iij
 Vini opii, m. v
 Mellis rosæ, f. ʒj
 Aquæ rosæ, f. ʒvj. M.
 A gargle, to be employed as above.

SYPHILITIC SORE THROAT.

DR. BIETT, FRANCE.

1656. R. Hydrargyri chloridi corrosivi, gr. iijss
 Ammonii chloridi, ℥j
 Vini opii, f. 3j
 Mucilaginis acaciæ, ss
 Mellis despumati, f. 3ss
 Aquæ destillatæ, f. 3v. M.
- A gargle, advised in syphilitic sore throat.

DR. ROSS, FRANCE.

1657. R. Tincturæ iodidi, .
 Tincturæ opii, ss f. 3j
 Aquæ destillatæ, f. 3v. M.
- This gargle is useful in syphilitic ulcerations of the throat.

SYPHILIDES.

DR. BOINET, FRANCE.

1658. R. Acidi tannici, Div
 Tincturæ iodinii, gr. viij
 Aquæ, Oj. M.
- A tablespoonful, in wine, twice or thrice daily, in syphilitic diseases.

H. GREEN.

1659. R. Hydrargyri chloridi corrosivi, gr. iv
 Tincturæ gentianæ, f. 3iv
 Syrupi aurantii florum, f. 3iss. M.
- A teaspoonful thrice daily in secondary syphilis and chronic skin affections.

VINUM AROMATICUM.

The following formula is given by BUMSTEAD, as a substitute for the aromatic wine of the French pharmacopœia, when it cannot be procured :—

1660. R. Claret wine, 7
 Spiritus lavandulæ compositis, ss f. 3j½
 Tincturæ opii, f. 3j
 Acidi tannici, gr. xv-3ij
 Aquæ, f. 3viij. M.
- The dressing should be renewed several times a day.

APPENDIX.

1. *Aeration, the use of compressed and rarefied air.*
2. *Endermic medication, rules for.*
3. *Hypodermic medication, formulæ and doses for.*
4. *Inhalation, formulæ and doses for.*
5. *Insufflation.*

I. AERATION: THE USE OF COMPRESSED AND RAREFIED AIR.

The therapeutical effects of breathing air at different densities have long been matters of practical knowledge with the profession. Health resorts on mountains and by the sea have each claimed a particular class of patients. But the introduction of convenient apparatus to treat cases at their homes is very recent. That invented in 1875, by Dr. L. WALDENBURG, Professor in the University of Berlin, more or less modified, has been used in this country. Its value as a means of diagnosis is considerable. According to Dr. LOUIS ELSBERG, of New York, by means of it, dyspnoea, difficulty of breathing, which could hitherto be denoted by indefinite expressions only, can be characterized with exactitude both qualitatively and quantitatively—the first by showing whether it is inspiratory or expiratory, or both combined, the latter by determining in figures its precise extent or degree. And not only can the difficulty of breathing be determined when it exists subjectively as well as objectively, but in the first beginnings of a respiratory insufficiency, before the patient himself is conscious of it, except, perhaps, upon very unusual exertion, before we can discover its existence by any other method of examination hitherto known, the *pneumatometer* may indicate a deviation from healthy respiration. Again, in obscure cases of differential diagnosis, the weight of the evidence supplied by the *pneumatometer* may turn the scale in the right direction, ~~when~~ this might not be discernible without its revelation. Dr. B. FRANKEL, of Berlin, has for practical purposes suggested that, if a metal tube, with a mouth-piece surrounded by an inflated rubber cushion, be inserted into the bellows of an accordeon, a pneumatic apparatus is devised, which is quite serviceable in many cases. If the bellows are expanded by draw-

ing the accordeon apart, the air contained in it will be rarefied; if it is pressed together, the air is condensed. On the margin a scale should be placed, which will show how far the wooden sides of the bellows are apart, and thus indicate the amount of compression or rarefaction of the contained air. There is no danger in using such an instrument, as the utmost condensation which can be obtained by manual force is one-eighteenth of an atmosphere, and of rarefaction one-twentieth of an atmosphere. The patient should use the apparatus in a sitting posture, and apply his mouth to the cushion, and move the bellows with his hands; the rarefaction or condensation of the air in the bellows will thus be communicated to that in the lungs.

The uses of rarefied and compressed air are; first, to induce artificial respiration in cases of chloroform asphyxia, that of the new-born, that from carbonic oxide, drowning, and similar accidents; secondly, in emphysema, chronic bronchitis, asthma, partial hepatization following pneumonia, and similar affections; thirdly, in disorders of the circulation depending on mitral disease; fourthly, in phthisis.

In regard to the last-mentioned, its value is not at all established, but it is probable that it may prove a useful accessory to general measures. On the circulatory system the effect of breathing air at various densities is marked. Dr. JULIUS SOMMERBRODT (*Deutsches Archiv für Klinische Medicin*, Bd. XVIII) has shown that from the first inspiration of compressed air the pressure and amount of the blood is increased in the general circulation and decreased in that of the lungs, and the heart contracts more frequently and with greater force. When, therefore, there is passive hyperæmia of the lungs dependent on mitral insufficiency, for example, or chronic bronchitis, the use of compressed air is clearly indicated, as is the employment of rarefied air in the emphysematous condition so often associated with asthmatic complaints and recurrent coughs.

II. ENDERMIC MEDICATION, RULES FOR.

Endermic medication is the introduction of medicines into the system by causing their absorption from a denuded portion of the surface of the body. Those medicines only are adapted for administration in this way whose dose is not large, and which do not irritate the surface to which they are applied. *Morphia* is the one the most frequently given in this manner.

The part best suited for endermic medication is the epigastrium; but

any portion of the anterior surface of the body, or the inner surface of the thighs and arms, may be chosen for the application.

The denuded surface for the application is obtained by blistering; ordinarily the blister of cantharides is employed, but, in case of emergency, the more rapid action of the stronger solution of ammonia may be taken advantage of. The blistered surface should be, upon an average, three or four inches square.

The medicine should be finely powdered, and, if irritant, mixed with acacia or other bland substances. It should be sprinkled equally over the surface or applied upon simple cerate dressings. If liquid, or so soft that it cannot be powdered, it may be rubbed up with solutions of gelatine, mucilage, lard, or cerate, and applied upon pledgets of lint.

The dose of medicines given endermically may be twice or thrice that by the mouth. As the offending matter can be readily removed, there is less danger from overdose than in the case of medicines taken into stomach.

Though hypodermic has, in great measure, superseded endermic medication, Dr. BROWN-SÉQUARD protests (*Lancet*, March 10, 1866) against the abandonment of the latter, which possesses the double advantage of counter-irritation and rapid absorption, and may, in some cases, prove more useful than subcutaneous injection.

Cautions.—Sloughing and a permanent scar may result from the incautious employment of an irritant medicine, as has been the case with the application of undiluted sulphate of quinine.

III. HYPODERMIC MEDICATION, FORMULÆ AND DOSES FOR.

APOMORPHIA.

The dose of apomorphia, hypodermically used, for an adult, ranges from gr. $\frac{1}{16}$ — $\frac{1}{8}$, but in children it is quite large in proportion.

For a child of 18 months.....	gr. $\frac{1}{16}$
“ “ 2 years	gr. $\frac{1}{8}$
“ “ 3 “	gr. $\frac{1}{4}$
“ “ 3½ “	gr. $\frac{1}{2}$
“ “ 5 “	gr. $\frac{3}{8}$
“ “ 8 “	gr. $\frac{1}{2}$

Glycerine seems to preserve the strength of the drug, and alcohol will dissolve it more readily than water, so it may be prepared after the following formula:—

1661. R. Apomorphia, gr. viij
 Spiritus rectificatus, ℥xx
 Glycerinæ, ℥x
 Aquæ, ℥l. M.

In a child of two years, $\frac{1}{12}$ of a grain may be used.

Therapeutics.—A useful emetic in children with croup or diphtheria, in protracted labor from rigidity of the os, in poisoning, and generally where a prompt emetic effect is desired, and the hypodermic method indicated.

AQUA.

The use of *pure cold water*, by hypodermic injection, has been found very efficient in the relief of pain, especially that of a rheumatic and neuralgic character. The relief is often instantaneous and permanent. From gtt. x–xij may be used at once, and the injection repeated several times. The method was suggested by M. LÉLUT, of France, and has in this country been favorably reported upon by Dr. S. HENRY DESSAT, of New York, and others.

ARSENIC.

1662. R. Liquoris potassæ arsenitis,
 Aquæ destillatæ, ss ℥iij. M.
 For one injection, gradually increased to ℥xiv of Fowler's solution.

Prof. ROBERTS BARTHOLOW suggests that *liquor sodæ arsenitis* (in doses of ℥v, x, or even xv, on every other day) is less irritating than Fowler's solution.

Therapeutics.—Dr. RADCLIFFE has used arsenic hypodermically, with benefit, in cases of chorea, neuralgia, epilepsy and other nervous affections.

ATROPIA.

1663. R. Atropiæ sulphatis, gr. ij
 Aquæ destillatæ, f. 3j. M.
 Five minims = gr. $\frac{1}{15}$.

With this formula the dose can be better regulated than with stronger solutions.

Dose.—LORENT begins with gr. $\frac{1}{10}$ and goes up to gr. $\frac{1}{5}$; SUDEKUM and BEHRER, gr. $\frac{1}{10}$; HUNTER, gr. $\frac{1}{15}$; SCHOLTZ and OPPOLZER, gr. $\frac{1}{15}$; GRÆFE and DEPUIT, gr. $\frac{1}{15}$; NUDIFER, gr. $\frac{1}{15}$; COURTY, gr. $\frac{1}{15}$; BELL, gr. $\frac{1}{15}$; TROUSSEAU, gr. $\frac{1}{15}$ – $\frac{1}{10}$; RUPPNER, gr. $\frac{1}{15}$ – $\frac{1}{10}$. Dr. BARTHOLOW says that 5℥ of (F. 1662), or $\frac{1}{15}$ of a grain, is the largest amount desirable in most cases, and that it will be rarely necessary to inject more than gr. $\frac{1}{15}$ at one time.

ATROPIA AND MORPHIA.

1664. R. Morphine sulphatis, gr. xvj
 Atropine sulphatis, gr. j
 Aquæ destillatæ, ʒj. M.
 Filter.

Five minims = gr. $\frac{1}{8}$ of morphia and gr. $\frac{1}{8}$ of atropia. Or, combine f.ʒj of F. 1662³ with f.ʒiv of F. 1662⁴, making a solution of which 5 minims = gr. $\frac{1}{8}$ of morphia, and gr. $\frac{1}{8}$ of atropia.

Therapeutics.—Used in insomnia (in the proportion of gr. $\frac{1}{16}$ – $\frac{1}{8}$ of atropia to gr. $\frac{1}{4}$ – $\frac{1}{2}$ of morphia); neuralgia; epilepsy; asthma; angina pectoris, spermatorrhœa (atropia in excess); pelvic and uterine pain; rheumatic arthritis; muscular and acute rheumatism (in all such cases atropia in excess).

CAFFEIN.

1665. R. Caffeine puri, gr. vj
 Alcoholis, ʒj.
 Aquæ destillatæ, ʒj. M.
 Twenty minims = gr. j.

1666. R. Caffeine citratæ, gr. j
 Glycerinæ, gtt. xxiv. M.
 For one injection.

Dose.—Gr. j.

Therapeutics.—In *neuralgia*, *hysterical headache* and *opium poisoning*. Prof. BARTHOLOW suggests that, as there is no incompatibility, caffeine and atropia be used at the same time hypodermically in cases of opium narcosis. Dr. EULENBURG states that caffeine, when injected in doses from one-fifth to two-thirds of a grain, relieves *occipital neuralgia* and *hysterical headaches* generally.

CONIA.

1667. R. Coniæ, gr. ij
 Alcoholis, f.ʒj. M.
 Dissolve and add,

Aquæ destillatæ, f.ʒij. M.
 Gtt. j = gr. $\frac{1}{16}$.

1668. R. Coniæ, gr. ss
 Alcoholis, f.ʒss. M.

Dissolve and add,

Aquæ destillatæ, f.ʒiss. M.
 Five minims = gr. $\frac{1}{4}$.

NICOTIA.

DR. A. ERLÉNMEYER.

1684. R. Nicotiæ,
Aquæ destillatæ, gr. ss f. ʒij. M.
Four minims = gr. $\frac{1}{4}$.

Dose.—Gr. $\frac{1}{4}$.

Therapeutics.—Prof. HOUGHTON, of Dublin, has employed this agent with success in cases of traumatic tetanus, of which about one-half the cases treated recovered. Nicotia is a physiological antagonist to strychnia.

PHYSOSTIGMA.

PROF. ROBERTS BARTHOLOW.

1685. R. Extracti physostigmæ,
Aquæ destillatæ, gr. ij f. ʒj. M.
Filter. Ten minims = gr. $\frac{1}{4}$.

This solution must be prepared when wanted, as it soon becomes unfit for use. Its acidity should be neutralized by carbonate of soda.

REMARKS ON THE HYPODERMIC USE OF CALABAR BEAN.

Dose.—gr. $\frac{1}{4}$ of the extract to begin with.

Therapeutics.—Tetanus and chorea have both been treated with success by this remedy. In the first-named affection, it probably stands at the head of all known remedial agents. It is also employed in *strychnia poisoning*.

Dr. ALOIS MONTI, of the St. Ann's Child's Hospital, reports three cases out of five of *trismus neonatorum* cured by this remedy. He prefers subcutaneous injection, as he thinks the internal use uncertain. He repeats these injections every ten or fifteen minutes until the spasms cease; then intermits them, even for several hours, until the cramps return again. For new-born children he uses one-tenth grain of the extract per dose, and goes up to one-third, one-half, or a whole grain a day. Older children can commence with one-third grain per dose. For internal use, from one to four grains a day may be given.

The *antidote* to physostigma is strychnia, which is its physiological antagonist.

QUINIA.

FORMULÆ FOR THE SOLUTION.

PROF. ROBERTS BARTHOLOW, CINCINNATI, OHIO.

1686. R. Quinise sulphatis, ʒi
Acidi sulphurici diluti, ℥xl
Aquæ destillatæ, f. ʒj. M.
Give 15 to 30 minims. Carefully filter.

may arise from the penetration of a superficial vein by the point of the syringe. His experience may serve to put physicians on their guard against a fearful danger. He observes: "During the last two months I have undergone a frightful experience twice in my own person, and three times in the case of my patients. The point of the syringe entered a subcutaneous vein, and the morphia was thus injected directly into the blood, instead of into the subcutaneous tissue. On the first occasion I injected two grains of acetate of morphia,* dissolved in fifteen minims of water, into one of my subcutaneous abdominal veins, and felt as if I should die in a few minutes. In a couple of seconds there was a pricking and burning sensation over my whole body, a strongly acid taste in my mouth, my whole face was nearly as red as the normal color of the lips, and in about four seconds after the injection there was a ringing sound in the ears, while scintillations flashed before the eyes, and there was intense pain in the integuments of the head. But the most terrible of all the phenomena was the extremely powerful and rapid action of the heart. Out of more than 25,000 patients, I have never felt such a pulse. Its beats ranged from 160 to 180 in the minute, while the carotids had no time to discharge their contents, and felt like thick tremulous iron cords on either side of the neck. The action of the heart and arterial pulsations were so strong that I felt as if the walls of the chest or the diaphragm must give way, and that my eyeballs must burst. This fearful state, in which the respiration was considerably impeded, lasted on the first occasion about eight minutes. The suffusion of the face was followed by a deadly pallor, which lasted for an hour, while the acute pain in the head subsided in fifteen minutes. The mind was in no degree affected, and with an effort I could stand and speak. Cold applied in the form of washing, affusion, etc., was very agreeable and beneficial. In the course of two hours, the whole of the symptoms disappeared. In my other personal misadventure the symptoms were far less severe, in consequence of the injected dose being much smaller. Taught by experience, I have since then always injected very slowly, and as the phenomena come with such lightning-like rapidity, I thus secure time, if necessary, to reverse the pumping action of the syringe and to recover a part of the injected fluid mixed with blood. I have on several occasions seen the happy results of this manipulation. The three of my patients in whom a vein was entered were in even a more critical state than I personally was. There was a partial loss of consciousness, and there were convulsions, but no persistent consequences ensued."

*This would have proved a highly dangerous dose to most persons if simply injected into the subcutaneous tissue.

quantities of quinine, we are able in a great number of febrile states of a remittent or intermittent type to produce a temporary, and frequently a considerable, diminution of the febrile temperature of the body." This fact, which he clearly proves by numerous cases, obviously has an important bearing upon the treatment of various forms of disease. In cases of typical neuralgia (sciatica and tic) this remedy has been highly serviceable, and especially so in sunstroke.

STRYCHNIA.

PROF. ROBERTS BARTHOLOW, CINCINNATI.

1690. R. Strychniæ sulphatis, gr. ij
Aquæ destillatæ, f. ʒj. M.
Five minims = gr. $\frac{1}{16}$.

DR. E. A. ERLÉNMEYER.

1691. R. Atropiæ sulphatis, gr. j
Aquæ destillatæ, f. ʒj. M.
Five minims = gr. $\frac{1}{24}$.

DR. ALBERT EULENBURG, BERLIN.

1692. R. Strychniæ sulphatis, gr. ij
Aquæ, f. ʒj. M.
One minim = gr. $\frac{1}{80}$.

DR. WALDENBURG.

1693. R. Strychniæ sulphatis, gr. ij
Glycerinæ, f. ʒss
Aquæ destillatæ, f. ʒjss. M.
One minim = gr. $\frac{1}{80}$.

All these solutions become unfit for use if kept long on hand.

REMARKS ON THE HYPODERMIC USE OF STRYCHNIA.

Dose.—This alkaloid has been employed in various doses, thus:—NEUDORFER, gr. $\frac{1}{80}$; ECHEVERRIA, of New York, gr. $\frac{1}{80}$ — $\frac{1}{16}$; CHARLES HUNTER, gr. $\frac{1}{80}$ — $\frac{1}{4}$; BARTHOLOW, gr. $\frac{1}{16}$ — $\frac{1}{4}$; WALDENBURG and DELBEAU, gr. $\frac{1}{80}$; EULENBURG and BOIS, gr. $\frac{1}{8}$; COURTY, gr. $\frac{1}{8}$; RUPANER, gr. $\frac{1}{16}$ — $\frac{1}{8}$; LORENT, gr. $\frac{1}{16}$ — $\frac{1}{80}$.

ANTIDOTE FOR STRYCHNIA POISONING.

The *calabar bean* (F. 1684) is a complete antagonist to the toxic effects of strychnia. In its absence, the inhalation of ether, successfully employed by Dr. ECHEVERRIA, may be resorted to. Dr. EULENBURG mentions a case that occurred at Königsburg, in which a young man who had taken one gramme and a half of strychnia was apparently saved by the hypodermic application of *woorara*.

Therapeutics.—The subcutaneous injection of strychnia is principally used in cases of paralysis and neuralgia. ANSTIE commends it as the remedy *par excellence* in *gastralgia*, injected in doses of gr. $\frac{1}{10}$ – $\frac{1}{5}$. Dr. EULENBURG has found it (in doses of $\frac{1}{10}$ – $\frac{1}{5}$ of a grain of the sulphate) highly valuable in cases of facial paralysis, paralysis of the vocal cords, paralysis of the bladder, prolapsus, spinal paraplegia, spasmodic muscular contractions, amaurosis and sciatica.

WOORARA.

DR. SCHUH, VIENNA.

1694. R. Woorara, gr. j
Alcoholis, gtt. olx. M. ^{gr. 1/2} _{gr. 1/2} 3 cr

Eight minims = gr. $\frac{1}{5}$.

Dose.—This may be said to vary between gr. $\frac{1}{5}$ and gr. $\frac{1}{10}$. SPENCER WELLS has injected as much as gr. $\frac{1}{5}$ at one time. GHERINI had gr. ij dissolved in f. 3ij aquæ destillatæ, and injected the solution in twenty-four hours.

Therapeutics.—*Tetanus* is the disease for which woorara has been chiefly used subcutaneously. It has also been administered in *epilepsy*.

IV. INHALATION, FORMULÆ AND DOSES OF MEDICINES FOR.

The doses are calculated for an ordinary steam atomizer.

1695. R. Acidi carbolici fluidi, gtt. iij–x to aquæ f. 3j.
In phthisis.

1696. R. Acidi tannici, gr. j–xx to aquæ f. 3j.

In chronic catarrhal affections, cedema of glottis, and laryngeal ulcerations. In ordinary laryngitis and in bronchitis, begin with small doses, and discontinue if much heat and dryness be produced (DA COSTA).

1697. R. Aluminis, gr. v–xxx to aquæ f. 3j.

Particularly useful in cases of excessive secretion from bronchi (DA COSTA). In large doses employed in pulmonary hemorrhage. More sedative and better suited to irritable conditions than tannin.

1698. R. Ammoniae muriatis, gr. ij–3ij to aquæ f. 3j.

To promote expectoration in acute and chronic laryngeal and bronchial catarrh, and in capillary bronchitis. SIEGLE says the dose best borne is not above gr. x–f. 3j.

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